GOOD CAREER GUIDANCE
APPENDICES 1–5

GATSBY

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APPENDIX 1: REPORTS FROM THE OVERSEAS VISITS

GATSBY

INTRODUCTION

This Appendix presents the findings from six overseas visits: Canada (Ontario), Finland, Germany, Hong Kong, the Netherlands and Ireland. Evidence was gathered through desk research and visits to understand what good practice exists in these countries. The country reports provide information around the following outline of the education system; relevant findings in relation to science, technology, engineering and mathematics (STEM) agendas; career guidance provision; and reflections on implications for practice in England.

CASE STUDY SELECTION

International case studies were undertaken to secure first-hand up-to-date descriptions of career guidance activity with a specific focus on STEM, backed by evidence of good or interesting practice. This was with a view to transferring or adapting lessons to practice in England. Discussions between the steering group and the project team suggested that within Europe it would be useful to include a Scandinavian country (because of their generally high-performing schools), either Germany or Austria (because of their vocational orientation), Netherlands (because their experience of school-based systems provides a precedent for current career policy in English schools), and Ireland (because of their Programme for International Student Assessment (PISA) scores relative to England and their recent review of career guidance in schools).

Other international examples of guidance were considered and recent policy innovations have been implemented at state level in both Hong Kong and Canada. In Hong Kong the educational system has recently been completely restructured alongside a strong careers professional association, while in Ontario the focus has been on re-engineering schools. These provided contrasting and interesting scenarios to explore practices that support STEM careers.

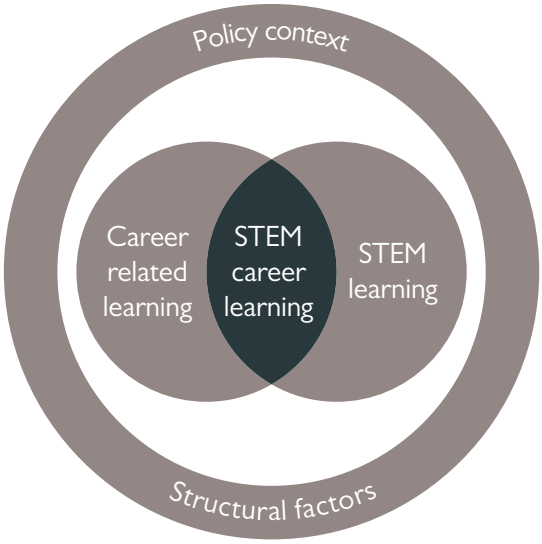
Consequently criteria for country selection included:

- Sharing some infrastructural and cultural similarities to educational provision in England;
- High-performing educational systems as measured by PISA research;
- An existing evidence base on their career provision in mainstream schools and/or on their vocational education and training systems (e.g. from Organisation for Economic Co-operation and Development (OECD) reviews of career guidance and subsequent OECD work on post-secondary vocational education and training and from European Lifelong Guidance Policy Network).

Each visit lasted three days (or two days in the case of Ireland). Visits combined meetings with key experts and visits to at least two schools with good or interesting careers practices that included an emphasis on links with STEM careers. Each international case study visit comprised meetings with the following:

- An academic or other independent with an interest in careers education and guidance, to provide an overview of how the education system works and the careers system within it;
- An academic or other independent with an overview of science/STEM and labour market issues relating to young people's take-up of education and employment issues;
- A policy-maker or public official with an overview of career support in schools and colleges;
- A policy-maker or public official with an overview of science and/or STEM policy in schools and colleges;
- At least two STEM employer representatives;
- At least two secondary schools (or equivalent), including speaking with a senior leader of the school, the careers lead in the school, a STEM subject teacher, some pupils who have experienced the careers provision, and local employers.

Thematic areas that were discussed in the case study are summarised in the diagram below. Discussions were centred on how learning about careers and learning about STEM intersect to encourage young people to learn about STEM careers. To do this effectively the research team also needed to explore the context of policy developments and broader structural factors that shape the education and labour markets. These thematic areas were further elaborated in a discussion framework for interviews, discussions and observations with academics, policy-makers, practitioners, teachers and advisers, and young people.



ONTARIO, CANADA

EVIDENCE GATHERING

This report has been written by John Holman and Tristram Hooley and is based on the sources below. Further details are listed at the end of this Appendix.

a) Desk research.
b) Visits on 9th to 11th September 2013 to three secondary schools in Toronto:
   – Central Technical School, with 1,800 pupils and expertise in vocational, technical, apprentice and special education;
   – Scarborough Academy for Technology, Environment and Computing (SATEC), with 1,200 pupils and a focus on computer technology; the large majority of pupils are bound for university or college. Two-thirds of its pupils come from out of area, and are selected using a test;
   – Northern Secondary School, with 1,800 pupils and a focus on technology, the large majority of pupils being bound for university or college.
c) Meeting with officials at the Toronto District School Board.
d) Meeting with officials at the Ministry of Education of the Province of Ontario.
e) Discussions in Toronto with representatives of The Canadian Career Development Foundation; Let's Talk Science, the Ontario School Counsellors' Association and Career Cruising.

OUTLINE OF EDUCATION IN CANADA AND ONTARIO

Canada

Canada is one of the largest countries in the world but has a relatively small population of 34.5 million people. However the population is very substantially concentrated to the south of the country along the border with the US and still further concentrated in particular provinces and around key urban centres. Canada comprises 10 provinces (Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland and Labrador, Nova Scotia, Ontario, Prince Edward Island, Quebec, and Saskatchewan) and three territories (Northwest Territories, Nunavut, and Yukon).

Each province functions as an administrative unit with its own governmental functions. The education system has always been the responsibility of provincial government since the British North America Act 1867, and Canada is the only country in the developed world with no federal department of education. More recently responsibility for employment policy and the labour market has been devolved from the federal to provincial governments.

Ontario

Such is the autonomy of provinces in the matter of education that this report is effectively about Ontario rather than Canada. Around 40% of the country's population live in Ontario which is also home to the federal government (in Ottawa) and the country's largest city (Toronto). The province is ethnically diverse with around 20% of the population drawn from visible minorities.[1] Around 10% of the population are French-speaking.

As in other provinces, responsibility for education is divided between the provincial government and more locally-elected school boards. The Ontario provincial government is responsible for setting the curriculum, determining many major policies and providing funding for schools. The Toronto District School Board, which controls the three schools we visited, is the largest of 72 school boards in Ontario, with 260,000 (172,000 elementary and 87,000 secondary) pupils in almost 600 schools throughout Toronto.[2]

[1] This is an official term used by Statistics Canada in connection with Canada's Employment Equity policies.
[2] Further information about the Toronto District School Board is available on its website at www.tdsb.on.ca

The education system

Canada's education and qualifications system is the responsibility of individual provinces and territories, making generalisations about the education systems difficult. However, broadly speaking, compulsory schooling starts with kindergarten (age five) or Grade 1 (age six). Primary school runs from Grades 1 through 6 (ages six–12). Secondary education is usually separated into junior high school from Grades 6 through 9 (ages 12–15) and high school Grades 10 to 12 (ages 17–18). Post-secondary education is available in both government-supported and private institutions. Universities and university colleges offer bachelor's degrees, master's degrees and PhD, while colleges offer certificates, diplomas, and associate degrees.[3]

Ontario has a well-developed secondary education system which despite a number of key differences provides a good comparator for England. The system is essentially a comprehensive one, albeit one in which there is strong differentiation between different schools (e.g. technical focus, science focus). This visit focused on Toronto where most pupils have a large number of schools within their travel to school area, which facilitates the development of a differentiated market of schools. We anticipate that schooling in smaller towns and rural areas would have a different (more generalist comprehensive) character. A key difference between Ontario and England is the qualifications system. In Ontario pupils are judged on their ability to graduate high school with 30 credits[4], and to a lesser extent on their performance within different subjects. In order to graduate high school pupils also need to have completed 40 hours of community involvement activities and to have passed the provincial literacy requirement. There is no system of external examinations. As in the USA, schools provide their own summative grades in a credit-based system that by and large enjoys public trust.

Another key difference is that secondary education is essentially a 14–18 system. Recently the Ontario government has sought to encourage pupils to finish high school in four rather than five years, meaning that Ontario is moving towards 14–17 as the core high school cohort. However, pupils can potentially remain within the secondary school system until the age of 21 depending on a variety of personal factors.

Pupils are required to take 18 compulsory credits (within which there is limited choice) and then at least an additional 12 optional credits (within which there is considerable choice). Secondary schools offer a wide range of courses with pupils able to exercise considerable choice. It is possible for choices to be made every semester throughout a student's time in the school. This plethora of choice also makes the role of guidance counsellors within the school particularly critical. The pupils' strategies around course choices require considerable foresight about post-secondary direction, as well as technical information about post-secondary course requirements.

School accountability

Compared with the English system, public accountability is light touch. There is no equivalent of Ofsted inspection, though the District School Board conducts a review of its schools on a cyclical basis. There are no school performance tables to compare with those in England. The District Review process results in a report provided to the school, not for the public, and contains recommendations for the school to pursue in the School Improvement Plan.

On the other hand, Ontario schools have little autonomy compared with England. Funding is controlled by the Board and the principals' decisions are closely monitored by the Board superintendents of education. Although there is scope for variation in the curriculum offer, this is within a framework laid down by the Province. Nevertheless, there is wide diversity among the schools we saw, with a range of specialisms that is comparable to that found in England.

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[3] Further information about Canada's education system see: OECD (2010). *Strong Performers and Successful Reformers in Education: Lessons from PISA for the United States*. Paris: OECD.

[4] 34 credits is the maximum that pupils are allowed to take under normal circumstances.

Recent reforms

Ontario is fêted internationally for its successful education system. Much international interest has centred on the educational reforms – the Student Success Strategy – which started in 2003 and enjoy political consensus. The aim of the 2003 reforms was to drive up attainment levels as measured by high school graduation rates. A mark of its success is that secondary school graduation rates have risen from 68% in 2003/04 to 83% in 2011/12.[5] A key element of the strategy was the development of Ontario's vocational education system through a number of linked initiatives including co-operative learning, apprenticeship and the Specialist High Skills Major Program (essentially a technical curriculum pathway). All of the schools that we saw offered substantial vocational programmes. The initiatives are supported by a Student Success Teacher in every secondary school, whose job is to identify and support pupils who are at risk of failing due to low credit accumulation.

Pupils are streamed on entry to secondary school into an academic or applied route. It is possible for pupils to move between these pathways, but this becomes more difficult the further the student moves up the school. The schools we visited offered 'taster' courses in aspects of technology to help pupils decide on the applied route they wish to follow.

The education reform agenda has been judged to be successful in driving up standards and there seemed to be broad support for it amongst the teachers and principals to whom we spoke. While we heard a number of reports of recent strife within the Ontario education system around pay and conditions, this did not seem to extend to substantial differences about the educational approach taken in the province. Our impression is of a system focused, through the Student Success initiatives, on preventing those at risk from falling behind. The education reform process is currently in the process of being refreshed, with a new career guidance policy forming an important part of the next phase of the agenda.

RELEVANT FINDINGS

STEM

Ontario has a strong manufacturing industry with particular specialisation in the motor industry. The province is where almost half of Canada's knowledge intensive industries are based. The province also has strong agricultural, extractive and service industries as well as a substantial public sector.

Nevertheless, we found little evidence of a 'STEM education agenda', such as exists in the USA and many Western European countries. This may partly be because the educational ideology articulated by educators whom we met at all levels – from the Ministry down – places value on education for its own sake. One consequence of this liberal ideology may be a limited interest in the relationship between education and the labour market and consequently limited structures for education-employer liaison beyond the context of 'Co-operative Learning' (work experience). However, we did not have any direct discussions with employers, who may have a different view. We were told that one reason that STEM skills shortages do not influence education in the same way as in other countries is that they are dealt with by inward migration.

We met with one initiative, Let's Talk Science, a non-profit organisation which does outreach work to popularise science, using young volunteers.[6] It appears to have a similar role to STEMNET in the UK. Other science outreach organisations also exist with a focus on engaging under-represented groups (women, visible minorities and native Canadians) in science.[7] However, none of these groups articulate their purpose strongly in terms of labour market need or skills under-supply.

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[5] Ontario Ministry of Education (2013). *Getting Results: Ontario's Graduation Rate.* Available from: www.edu.gov.on.ca/eng/students/faqs.html [Accessed 23rd September, 2013].

[6] Further information about Let's Talk Science is available on the organisation's website at www.letstalkscience.ca

[7] These include Ms Infinity Ontario (www.msinfinityontario.com), which is focused on women and STEM, and Visions of Science (www.vosnl.org), which is focused on visible minorities and STEM.

CAREER GUIDANCE

Guidance counsellors

Within the Ontario system, guidance is far more integrated into core school processes than is the case in England. Each school has a guidance department which is close to the heart of the school's administrative structure, being strongly connected to the processes of choice and timetabling and often connected to 'Co-operative Learning' and other student support activities. The province allocates funding to schools on the basis of one guidance counsellor for every 385 pupils. Principals have some room to vary that allocation, and the three schools that we saw had matched or even exceeded it.

Guidance counsellors are all trained teachers with additional qualifications in career education and counselling. Some stakeholders argued that the career development element of this counselling training is too limited. From discussions with counsellors it seemed clear that labour market knowledge among the profession was far lower than knowledge about post-secondary options.

Guidance departments fulfil three main roles:

- They provide pastoral support for pupils who are experiencing personal difficulties;
- They work closely with pupils and the school administration to support educational choice-making and to build the school's timetable. This is a service both to the individual and to the school, but counsellors did not generally feel that these two roles were in tension. A key part of this is support for the transition to post-secondary opportunities, including the co-ordination of university and college entrance. There is a universal entitlement to access counselling for each student, though this is not a formal requirement;
- They play a role in the delivery of career development within the school, often in a leadership or coordinating role.

It was clear that the first two of these roles were more central to the practice of the guidance counsellors whom we met than the final one. Some research has also noted the predominance of educational counselling over career counselling in Ontario.[8] Nonetheless the important pastoral, administrative and educational guidance roles that are played by counsellors within the system give them a strong position within the school. Indeed it is difficult to see how the education system in Ontario, with its complex mix of streaming and choice-making, could function without the guidance counsellors. Significantly, in Ontario schools the guidance office is located close to the principal's office.

The guidance counsellors we spoke to were confident individuals who felt they were doing a good job in guiding pupils, though some felt they could interact better with parents to increase parents' understanding of the education and employment system and to help pupils make more realistic choices.

Careers in the curriculum

Alongside the career support offered by guidance counsellors, all pupils are required to take a credit module in Civics and Careers. This is usually taken in Grade 10 and typically devotes half of the time to civics (citizenship) and half to careers education. There was no suggestion that the two areas of the Civics and Careers course could be integrated, despite the potential that such a relationship presents.[9] In fact, these are separate credits, usually taught by two different teachers. The course is frequently taught by teachers with no specialism (and in some cases little interest) in careers. The reputation of the Civics and Careers course seems to be low with both staff and pupils.

[8] For example, Domene, J. F., Shapka, J. D., & Keating, D. P. (2006). Educational and career-related help-seeking in high school: An exploration of students' choices. *Canadian Journal of Counselling, 40*(3): 145–158.

[9] Arthur, J., Breslin, T., Law, B., Barnes, A., Barker, V., & Irvine, B. (2006). *Careers Education and Citizenship: An inclusive agenda.* Tunbridge Wells: Canterbury Christ Church University College.

Ontarian curriculum documents encourage teachers to cover careers as part of other curriculum areas. Some teachers spoke about the way in which they made links between careers and their curriculum areas while others admitted that it was difficult to keep this in mind. It was unclear how far the linkages to careers emerged out of curriculum specifications and how far they resulted from teachers' own judgements about how to make the curriculum relevant and engaging. Nonetheless, embedding career relevance into subject-based curricula is interesting and seemed to be something that might be built on in Ontario if the focus on careers becomes stronger.

Individual Pathway Plans

The Ontario Education Ministry is seeking to increase the role of career development in schools and a new policy is anticipated in the next few months. The main development is the Individual Pathway Plan (IPP; also known as an Individual Learning Plan).[10] This is a web-based tool which provides a structure for pupils' career development activities and an online space where resources and reflections relating to career development can be saved.

Typically, an IPP tool provides access to a bank of career profiles and an interest-matching facility, as well as a host of optional modules including, in some cases, opportunities interact online with employers. The Plan is owned by the individual but follows a structure that can be determined at province, school board and school level. The Ontario Education Department sees the IPP as the tool with which their career guidance policy, 'Creating Pathways to Success' will be implemented.

The IPP is currently delivered through two commercially available software packages (*My Blueprint* and *Career Cruising*). These were in use in the schools we visited, but the IPP idea is new and has yet to be fully realised. Educators at all levels were optimistic about the likelihood of the IPP being successfully implemented and embedded in practice, and it seems to offer a simple way to structure and drive pupils' individual career planning. It is designed to be easily completed, using occasional (10–20 minute) sessions. There will be a requirement that every student discusses their Plan with a member of staff at least twice a year, and shares it with their parents.

The implementation of IPPs has been carefully mapped by the Ontario Ministry of Education: the first stage is to provide funding and discuss with stakeholders before formally mandating its use.

Work experience

Work experience in Ontario schools could be described as 'all or nothing'. As part of the educational reforms Ontario has begun to grow a strong, formal work experience programme known as 'Co-operative Learning' (CL). Pupils can opt to take very substantial blocks of CL as part of their high schooling (from one to eight credits, where one credit is equivalent to 110 hours).[11] CL opportunities are credit-bearing and can be taken in any area in which pupils can find a willing employer. The schools we visited had dedicated CL teachers to lead the employer liaison and to help pupils prepare for and reflect on their placements. A critical factor in CL is finding enough placements: technical teachers with occupational licences are well placed to do this.

CL is a universal entitlement, but it is still a minority activity in Ontario and one which tends to be used more heavily with vocational pupils than those bound for university. We were told that Toronto is in the forefront of CL, so it is likely that the schools we saw were atypical of Ontario – and Canada – as a whole. CL is seen as the jewel in the crown of the Student Success Programme, and represents a gold standard work experience, but few university-bound pupils take it because they prefer to concentrate their efforts on academic courses that carry the credits they need for university. CL is seen as a natural route into apprenticeships through the Ontario Youth Apprenticeship Programme.

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[10] Elsewhere this has been described as an Individualised Learning Plan. This approach has been written about extensively by Scott Solberg and his colleagues, for example in Solberg, V. S., Phelps, L. A., Haakenson, K. A., Durham, J. F., & Timmons, J. (2012). The nature and use of individualized learning plans as a promising career intervention strategy. *Journal of Career Development*, 39(6), 500–514.

[11] This means that even at the lower end of the CL spectrum pupils are exceeding the two weeks offered in English schools when they had a work-related learning duty.

Outside of CL, there are limited opportunities for work experience and work-related learning. While there was some talk about job shadowing, 'take your child to work' days, careers fairs etc., these programmes were not strongly in evidence. We also heard about 'summer vac co-op' and 'virtual co-op', but these too seem to have limited penetration.

As a general point, we get the impression that, beyond CL, links between employers and schools are not a strong feature of the Ontario system. We were told that universities are seen to be particularly disconnected from the employment market, in what was described as an 'over-qualification' issue. Many pupils graduate from university then enrol for vocational courses in colleges before entering the job market.

Vocational education

Unlike some European countries, the Ontario system does not have a long-standing tradition of vocational education. However, since 2003 it has been actively promoted through initiatives such as CL and the introduction of the High Skills Major. Ontario demonstrates that it is possible to develop a vocational education route while maintaining a comprehensive system.

EMERGING LESSONS FOR ENGLAND

In some ways, Ontario's education is a good comparator for England: the schools are predominantly comprehensive, and (in Toronto at least) there is a wide variety of types, ranging from predominantly academic to predominantly technical.

But there is much that is different, and difficult to reproduce:

- Assessment and accountability are less high-stakes in Ontario, leaving schools more room for manoeuvre outside the core curriculum. On the other hand, schools have less autonomy in their individual decision-making;
- The assessment system, based on school assessment, credit-bearing courses and high school graduation, is very different from that in England, and offers more flexibility, for example, in accrediting work experience in the CL programmes;
- The guidance system, with its position at the heart of both the pastoral system and curriculum structures, is at centre stage, and thus potentially able to get career guidance taken more seriously than in the majority of English schools. However, the Ontario system would be impossible to reproduce in English schools without dismantling the prevailing pastoral structures and training a cadre of guidance counsellors on the North American model.

Nevertheless, there are several elements of the Ontario system that have potential for England:

a) Career guidance
   - Placing those responsible for careers and guidance at the heart of the curriculum choice process (particularly at ages 16 and 18) would give them a more embedded role within the school;
   - Ontario suggests a ratio (one counsellor per 385 pupils) that could be a benchmark for best practice;
   - Ontario offers a benchmark for good practice in the level of training for guidance counsellors/careers staff.

b) Career education – there are two possibilities suggested by the visit, though neither of them is conclusively demonstrated in Ontario:
   - Should schools be delivering a defined amount of dedicated career guidance? If so how much and how should it be accredited?
   - Should there be a process of cross-referencing subject curricula (e.g. Physics, Biology) to career guidance outcomes? If so to what extent and how will these outcomes be assessed?

c) Individual Pathway Plans – the use of a web-based planning tool and software like *Career Cruising* or *My Blueprint* has interesting potential as a way of structuring the core processes of career guidance, and is worth exploring further for England.

d) Work experience – in the CL model, Ontario may offer a benchmark for the highest quality work experience. It suggests a benchmark for both the quantity and quality of work experience. The fact that CL is credit-bearing is a clear strength; it is difficult to see how this aspect could be reproduced under the English system, unless perhaps through some extension of an existing qualification such as the Extended Project Qualification at AS level.
e) Vocational education – the Ontario Student Success Strategy suggests a model by which high-quality vocational education could be introduced within a comprehensive system like England's.

FINLAND

EVIDENCE GATHERING

This report has been written by John Holman and Jo Hutchinson and is based on the sources below. Further details are listed at the end of this Appendix.

a) Desk research.
b) Visits on 16th to 18th September 2013 to:
   – Comprehensive schools in Jyväskylä and Helsinki;
   – An upper-secondary school in Helsinki;
   – The Finnish National Board of Education;
   – Career guidance experts at the University of Jyväskylä;
   – STEM programme leaders in the University of Jyväskylä.

OUTLINE OF EDUCATION IN FINLAND

Finland

Finland's population of 5.4 million is scattered across a country of lakes and forests, with a population density of 16 people per square kilometre (the UK's is 255). Compared with the UK, the population is homogeneous with 97% speaking either Finnish or Swedish. Swedish is the official second language, spoken by 5% of the population, while the other indigenous language, Sami, is spoken by 0.3%.

For most of its history Finland was under the control of either Sweden or Russia, and did not become fully independent until 1917. The Finnish language was codified at that time, and the education system played a critical role in establishing and promoting the national language and identity. This is one of the reasons why education is held in exceptionally high regard by the Finnish people. This in turn is seen as one of the driving forces for the international success of Finnish education, which is rated by the Programme for International Student Assessment (PISA) and the Trends in International Mathematics and Science Study as one of the best in the world.

The education system

The education system in Finland comprises: pre-primary (six-year-olds); basic education (seven to 16–year-olds); and then two pathways which are inter-linked – vocational pathways leading to a polytechnic degree, and general secondary education leading to a university degree, a master's degree then doctoral study.[12] Education is free at all levels up to and including university, including free school meals (which most pupils take up), free pupil welfare services, and free transport to and from school in basic education for those pupils who need it. Special needs education is provided within mainstream schools – there are no separate special schools. There is a tradition of participation in adult education and extensive provision for it.

Schools are owned by the local municipality and funded by central government. The Finnish National Board of Education (NBE) is an agency of the Ministry of Education and Culture. The NBE prepares the content of the national core curricula and is in charge of the national joint application system for upper-secondary level education.

[12] Further information on the Finnish education system is available from: Centre for International Mobility (2012). *Lifelong Guidance in Finland*. Helsinki: Ministry of Employment and the Economy.

At age six, children can start pre-primary school; this is not compulsory although 90% attend. At the age of seven, they start basic comprehensive education in Grade 1 and continue through to Grade 9 (age 16). This represents the compulsory element of education. Some schools have pupils from Grades 1 right through to 9 (we visited one such school); others have different age ranges, depending on student numbers in an area and the physical capacity of the school buildings.

After Grade 9, pupils have the choice to:

– Leave school altogether (around 5%);
– Move into upper-secondary (40–50%);
– Move to vocational schools (40–50%).

Upper-secondary and vocational studies are flexibly organised and timetabled through the municipality to allow pupils to optimise their subject choices and, if they want, they can combine upper-secondary (often known as high school), with vocational learning.

Upper-secondary pupils have to pass a minimum of 75 courses over two to four years, which must include English, mathematics and mother tongue (Finnish or Swedish). There is a wide variety of courses to choose from: more than 1,000 per year in the school we visited in the metropolitan area, making it more like a university than a school. Each course comprises three 75-minute lessons per week for six or seven weeks. At the end of their time in the school, pupils receive a diploma which sets out what they have studied; they also have to take matriculation exams which are the only external school exams in Finland.

Vocational studies are carried out in specialised vocational schools and can take three to four years, leading to specialist vocational qualifications. Upper-secondary level general education and vocational education have increased their mutual cooperation since the mid '90s. The pupils are entitled to include modules in their individual learning paths from more than one learning provider. In order to make this possible, the schools organise their training provision in standard six-week modules. After this further study, pupils can chose to move into university or polytechnic or into employment. It would not be unusual for someone to leave and then to return to education later to undertake higher level study.

There are therefore two key decision points when pupils move between institutions. There are also decisions to be taken about the mix of studies they take after their basic education.

Curriculum and assessment

The national core curriculum lays down curriculum content and required teaching time, but municipalities are expected to work with their schools to tailor its delivery, and teachers have considerable autonomy. Apart from the matriculation examinations, assessment is done entirely by teachers.

For an English visitor, the system is remarkable for the degree of trust it embodies. Teachers are trusted to deliver reliable assessments, and schools are trusted to maintain the expected standards. There are no league tables and no system of external inspection – though there are regular evaluation visits by school supervisors from the municipality. School performance data is not published by government although various media sources do collate and publish such data. The strongest pressure to perform comes from parents: if the school was doing badly, we were told, parents would 'vote with their feet' whereupon the municipality would quickly step in.

The overall quality of Finnish schools

Compared with England, there is little variation between schools, with PISA results confirming consistently high standards across all schools. More than anything else, it is this consistency which secures Finland's high rating in PISA. The PISA scores are so good for Finland, not because their high achievers are exceptionally high, but because of the small gap between the low and the high achievers. Parents may choose their child's school, but they generally go for the one that is closest – although there are some schools which offer specialisms in, for example, sport, and where there would be some kind of selection process.

The schools that we visited were excellent examples. Two of the three schools were in buildings that were less than 10 years old and with high quality architecture respected by pupils (the 10-year-old upper-secondary school looked brand new). They had good lab facilities, relaxing libraries, central areas for the free school meals and were open and airy with good natural light. The ethos, the calm and purposeful atmosphere and excellent behaviour of pupils all spoke of the high value of education and the promotion of achievement for all. Schools are small by English standards: 44% of comprehensive schools have fewer than 100 pupils and only 6% of schools have more than 500 pupils, so this also contributes to the sense of community.

In conversations with teachers and headteachers there were three common themes:

– Trust – teachers are trusted to teach and pupils are trusted to learn. Schools are very open environments;
– Support for young people – 'we cannot leave any young person behind'. There is collective effort to ensure that all children in a class learn what they need to know. It was frequently mentioned that Finland is a small country with an ageing population: children are important and the country needs young people to contribute to the economy;
– Mutual cooperation – parents are committed and supportive of education. The student information management system includes a communication system (called 'Wilma') which is widely used by teachers to communicate directly with parents, and vice versa. 90% of parents access Wilma online, and those who cannot are given access by paper. Parents therefore know what is being covered in class and any issues that might arise. They are invited into school and into classrooms if they want to observe lessons.

RELEVANT FINDINGS

STEM

There is a recognisable 'STEM agenda', as in the UK and other Western countries. Finland's economic future is seen to lie in the knowledge economy, which is underpinned by STEM. The need cannot be met by inward migration – this was generally excluded as an option because of the difficulty of learning the Finnish language and also the climate. However, the nuances around STEM are different from the UK, given the strong commitment to education as part of national identity.

The government has prioritised STEM over the past 20 years through a major investment in LUMA, a national project to improve skills in mathematics and natural sciences, which was managed by the University of Helsinki and included a range of projects in the municipalities as well as centrally. This ran from 1996–2002 and has a continuing legacy through the government-funded LUMA Centre at the University of Helsinki. This has many physical resources for teachers to visit with their pupils, and it also supports teachers' professional development.

The National Board of Education also emphasised the importance of industry in developing teaching materials and providing resources that allow pupils to learn about things that are of importance to employers and that represent 'cutting edge' developments in science or industry.

The lower participation rates in science and maths by girls is acknowledged. We were told that girls lose interest in maths and especially in physics as they move through Grades 7 onwards. Solutions were thought to lie either with better guidance, or by changing the pedagogical context so that it is at least gender neutral. Changing teachers' attitudes to what they teach and how they talk about gender roles in industry was said by the Finnish Board of Education to be an important part of the solution. However there were no specific programmes or activities mentioned to implement these potential solutions.

Gender imbalance in enrolment in computer science subjects was part of the discussion at Jyväskylä University. Having experienced reduced interest and enrolment in courses, the Computer Science Department is undertaking outreach programmes to encourage pupils to learn what computer science involves. Some of these programmes are integrated with high school programmes and offer credits. However, those involved acknowledge the difficulty of recruiting girls to such programmes.

Career guidance

The key elements in schools

Career guidance is provided in a systematic and structured way in all Finnish schools, and is well understood by teachers, pupils, parents and employers. The key elements comprise:

– Guidance counselling, available on demand from trained counsellors to all pupils;
– Career lessons, taught by guidance counsellors as part of a structured programme covering interpersonal skills, attitudes and choices;
– Work experience, within a systematic and structured programme;
– Coverage of career opportunities as part of regular lessons in science, mathematics and technology.

Guidance counselling

Schools in Finland have a range of support workers, generally including a school psychologist, social workers and school nurse, who can all work around a pupil when problems arise in the home lives of pupils.

Guidance counsellors enjoy high status. They are all trained teachers who have undertaken additional training in guidance counselling – this has been common practice since 1970. About 25% of all guidance counsellors have completed a master's degree programme (300 points on the European Credit Transfer and Accumulation System) in guidance. Many move to guidance after teaching in other subjects. There is no prescribed ratio of guidance counsellors to pupils, but we observed ratios of 1:350 and 1:300. The profession is arguing for 1:250 as the standard. The upper-secondary school that we visited had three guidance counsellors – each had a cohort of 300 pupils with whom they worked throughout their time at the school.

Two of the three headteachers we met were trained guidance counsellors. This is quite a common career path. In the 1970s counsellors were change agents in educational reform and were involved in introducing the new system to pupils, parents and teachers. They became experts in the new system and developed skills and knowledge which meant that they were welcomed as heads later on. Subsequently the role of guidance teacher provides a professional with a range of experience relevant for career progression to school management. They work with all teachers and across subjects, they have negotiation skills, they enjoy close working with head teachers who rely on them as deputies, they interact regularly with parents and with employers (and others in the local community) and they often manage aspects of timetabling. Guidance counsellors are widely known by the teachers and pupils by name.

The Finnish language does not have a word that means simply 'guidance'. Their word can mean study counsellor, careers counsellor, or counsellor in a pastoral sense and the role incorporates all of these aspects.

Guidance teachers undertake many activities:

– They will teach classes in Grades 7, 8 and 9 to deliver the guidance element of the national curriculum (see below);
– In many schools (including the comprehensive schools we visited) the guidance team is responsible for the administration and timetabling of pupil choices in their optional subjects;
– They liaise with local employers as part of the work experience programme, called TET.

Typically, pupils in a comprehensive school have a minimum experience of guidance activities as follows:

– Group guidance lessons in their first and second years;
– One-to-one interview with the guidance counsellor each year;
– Attendance at a careers fair;
– Talks from external academics and employers each year on a collapsed timetable Careers Day;
– Subject teachers offering information about how what they are learning is applied in practice and what jobs that might lead to (although this appeared to be variable depending on the teacher and the subject).

In addition they might have:

– A second course of guidance which begins to introduce them to university options in particular, and some further employment opportunities;
– Opportunities to participate in international exchange programmes which might also include visits to employers or research institutes.

Data management is considered important. The Wilma system has been adopted by most schools and provides a system for recording attendance (done at the start of every lesson) and course grades. It also provides a record for each conversation held between a pupil and the counsellor. It appears to be an effective management information system used by staff, parents and pupils. In the upper-secondary school, guidance counsellors play an important role in helping pupils find their way through the complex choice system, ensuring they complete the mandatory number of credits on time.

Careers lessons

Finland has a national core curriculum for career guidance that sets out the learning objectives and the number of hours that should be allocated to it in Grades 7, 8 and 9 – this is a statutory requirement. There are also minimum required hours of career guidance in upper-secondary. The goals and content are described in the national core curricula. In summary:

– Guidance lessons include learning about the educational system, about different jobs and occupations, about how to learn and how to make healthy choices. They might also include subjects such as health, respect, ethics, sex and relationships (although this appears to be at the discretion of the teacher). In Grade 7 a typical guidance class might focus on learning to learn, how to work well in groups, what each subject is about and integration of pupils from different schools.
– In Grade 8 it might typically include what jobs and occupations exist, some information about salary, employment rights, unions, different roles within an organisation and how to behave in a job interview, write a CV and a letter in preparation for their work experience (TET);
– Grade 9 would be more focused on the choices they make regarding moving to upper-secondary or vocational school, which schools exist, and how the points system for admission works. There might be presentations from other learning providers or trips to visit them. In Grade 9 every pupil will have at least one one-to-one counselling session.

Work experience (TET)

Finland has the most systematic and structured approach to work experience that we have seen. Employers are supportive of the work experience that all pupils in Grades 7, 8 and 9 undertake and are positive about hosting pupils in these grades, as well as accommodating young people as part of the vocational education placement system.

The objective of the TET is to improve pupils' knowledge about professions and working life. During the 'working life experience' periods pupils go out into employer organisations for a short period of time. This gives them the opportunity to gain the kind of experiences that can help them make better choices about their future education and profession.

The arrangements at Vaajakoski Comprehensive School seem to be typical:

– Grade 7 (age 13/14) – three days of 'working life experiences', often in the parents' workplace, or in a business selected from a local database. Additionally, one day on 'School as a working place', where pupils meet the people who work in the school, such as spending time in the kitchens or with the cleaning and maintenance staff;
– Grade 8 (age 14/15) – five days of work experience in local business or public sector. Pupils arrange this themselves and are given lessons on how to go about applying and securing a work placement. Periods of work experience are to be organised for the pupils as a basis for their educational and occupational choices, and to enhance their respect for work. Pupils that don't have appropriate family networks to draw upon can ask their school for support.
– Grade 9 (age 15/16) – nine days of work experience in a local business or the public sector.

The national curriculum regulations require that schools must have a plan for contact with employers. Most schools organise employer contacts for themselves, but there is also a national TET website (http://peda.net/tet) which provides a directory of local employer opportunities.

Work placement visits are carried out mainly by the guidance counsellors. In the upper-secondary school, where most pupils are university-bound, work experience takes the form of an optional, credit-bearing module. There are numerous opportunities for pupils to visit universities, and alumni often come in to talk about their experiences at university and in their careers.

Coverage of career opportunities as part of regular lessons

We were told that every teacher has a duty to learn about the career opportunities that arise from their subject and to make sure that their pupils are taught about this as the national curriculum requires. Professional development is offered in a variety of ways to help teachers to keep up to date with this, particularly through subject associations and the LUMA Centre. However, there are the familiar problems associated with travel to training, releasing of teachers from the classroom and shortage of supply teachers, and these mitigate against teachers being able to take up these opportunities. Therefore the extent to which teachers were actually able to let pupils know about career opportunities was in practice patchy, and this remains an area where there is a need for continuous development and improvement.

EMERGING LESSONS FOR ENGLAND

Education is Finland's great national project, and it was no surprise to find in Finnish schools a career guidance system as good as any we have seen. As always, transplanting from one system to another is not a practical possibility: Finland is a small country with a largely homogeneous population and an education system that is embedded within its national identity.

Nevertheless, several aspects of the Finnish system are well worth considering:

a) The careers education and guidance system is mandated, clearly specified and stable, so that teachers, pupils, parents and employers understand it and know what to expect. This may seem impossible to replicate in the highly deregulated English system, but clarity of expectations is something to aim for even in our system;
b) The arrangements for work experience are as good as we have seen anywhere, and provide a benchmark for what the best looks like;
c) The model of a national work experience website, providing a directory of local employer opportunities (http://peda.net/tet), is worth considering for England;
d) Guidance is provided by trained members of staff who have a central role in the life of the school. Their career work is combined with study guidance and subject choice, giving them a central position in the school organisation. Such a combination could be a way to counter the marginalisation of career specialists seen in many English schools;
e) The close involvement of parents at every stage in career and study choices is something to aspire to;
f) The 'School as working place' activity, where Grade 7 pupils meet the people (especially non-teaching staff) who work in the school to learn about their jobs, is an excellent idea. It builds respect for the staff as well as an early understanding of the workplace. We need to heed this and other creative ideas for giving encounters with the workplace without resorting to full-strength work experience;
g) We should note the Finnish experience of building careers awareness through subjects, especially science and maths. In Finland this is a compulsory part of the national curriculum and professional development opportunities are available to show teachers how to do it. Even so, we heard that such delivery of careers through subject teachers is patchy and depends greatly on the teacher's past experience. This corresponds to our experience in England. We should not give up on the aspiration of teaching about careers through subjects, but it is never going to be a panacea.

GERMANY

EVIDENCE GATHERING

This report has been written by John Holman and Jo Hutchinson and is based on the sources below. Further details are listed at the end of this Appendix.

a) Desk research.
b) Visits on 19th and 20th June 2013 to:
   – A vocational school and a *Gymnasium* (grammar school) in Osnabrück, Lower Saxony;
   – The vocational training centre at KME, a copper fabricator which is a major employer in Osnabrück;
   – The Federal Employment Agency in Osnabrück.
c) Roundtable discussion in Bielefeld (Lower Saxony) about career guidance in schools.
d) Roundtable discussions about STEM, diversity and gender at the *Kompetenzzentrum,* Bielefeld and the Osnabrück University of Applied Sciences.

OUTLINE OF EDUCATION IN GERMANY

Germany and its education system

Germany is a federal republic with population 82 million, including 7 million foreign residents. It is a federation of 16 provinces (*Länder*). Education is the individual responsibility of each *Land* and the federal government has limited scope for influencing the overall system. There is much diversity across the 16 *Länder*, but there are some unifying themes which are summarised below.

Although there are wide variations between *Länder*, within a given *Land* the arrangements are systematic, stable and well understood. Although there are some secondary comprehensive schools (*Gesamtschulen*), the most common arrangement is tripartite, with Hauptschulen (basic secondary schools), Realschulen (secondary schools with both general and vocational streams) and *Gymnasia* (pre-university grammar schools). However, over the past 50 years there has been a steady decline in numbers attending *Hauptschulen* (72% in 1960 to 18% in 2010) and growth in numbers at *Gymnasia* (17% to 35%), so the system is evolving towards a bipartite one.

The decision as to which kind of secondary school to transfer to at age 11 is by consensus between parents and teacher: there are no entry tests. For an English observer, this is remarkable and is a tribute both to the consensual nature of German education and the quality of the *Hauptschulen* and *Realschulen*, which make them a viable alternative to the grammar schools.

After the age of 16 the system becomes very diverse, but as a generalisation, pupils go one of three ways: to apprenticeship; to full-time vocational education; or to pre-university study in a higher level *Gymnasium*. The university system comprises general universities and 'universities of applied sciences', and for those entering occupational work there are opportunities for continuing education and training through 'trade and technical schools' and 'adult education colleges'.

A strong and much-admired feature is the 'dual system' for apprenticeships, involving strong partnerships between vocational schools and employers which extend through teaching, the workplace and the qualifications system. What is remarkable about this system is its extent: 49% of all people aged 25 to 39 have completed vocational training in the dual system (for comparison, 44% go through the university system). The system is deep-rooted and stable, having survived two world wars, partition and reunification, and if anything it is growing in strength. The key to it is the close partnership between vocational schools and employers, both of which understand and value the system, as do parents and pupils. Remarkably for an English observer, beyond the component spent in vocational school, apprenticeships are paid for entirely by the employer.

There are about 600,000 apprenticeships available each year in Germany. Apprenticeships give a deep training lasting two, three or more years, and apprentices spend between three and four days per week in their company, with one or two days at college following programmes for general and vocational knowledge, leaving pathways open to university for those who want them.

The system operates within a tightly regulated framework, with regulations for the vocational schools laid down by the Land and employers following a federal framework. It is very difficult to get a job in Germany without having either completed an apprenticeship or achieved a higher qualification. Thanks to this system, the youth unemployment rate (15–24 year olds in 2010) is only 6.8% which, remarkably, is lower than the general unemployment rate of 7.7%.

The tripartite school structure and the deeply-embedded dual system mean that what is done in Germany cannot readily be translated to the context in England. But there are some underlying principles which we identify and develop in the section on 'Emerging lessons for England'.

RELEVANT FINDINGS

STEM

Germany has a 'STEM agenda', broadly similar to that in the UK (the German equivalent of 'STEM' is 'MINT', which stands for Mathematics, Informatics, Natural sciences and Technology). Part of the stimulus for emphasising STEM came from the 'PISA Shock' of 2001, which challenged Germany's complacency and self-confidence in education.

Perhaps surprisingly for such a scientifically and technically advanced country, there is a shortage of young people wanting to take STEM qualifications. Germany has a large and very successful manufacturing sector (24% of GDP compared to the UK's 12%) which has remained relatively buoyant despite the Euro crisis and which demands people qualified in STEM at graduate and technical levels.

Putting this together with demands from other parts of the economy, there is an estimated shortfall. Surprisingly, and in contrast to France for example, there is perceived to be a serious mathematics deficit in school leavers. We were also told that young people prefer desk jobs rather than hands-on occupations: at KME (the copper company we visited), for example, there are 80 applicants for each administrative apprenticeship, but only two for each apprenticeship in the foundry.

Labour shortages are a major driver behind the close involvement of employers in education, which extends well beyond the apprenticeship system. Employers are proactive in their search for STEM talent, and there is a remarkable range of initiatives designed to attract young people into STEM, with an exceptional and apparently successful drive to get more girls. Even so, there is a strong sense of social responsibility extending beyond the labour market that motivates employers to get involved with schools.

STEM initiatives

There appear to be many initiatives to introduce and engage pupils in STEM industries, often running in close collaboration between an individual employer and the local schools. At the federal level too, large multinational companies like Siemens, Volkswagen and Deutsche Telekom have extensive school programmes. Our judgement is that such activity is more extensive than in the UK, and is growing. The economic context of a large manufacturing sector, economic growth, fewer young people and limited migration provide keen competition among employers for skilled and talented young people.

Activities include:

– Boxed kits which schools can order, such as the Siemens electronics kit for secondary schools, which has a range of experiments;
– Hands-on labs, such as the Zentrum ExperiMINT which we visited, based in university and run in collaboration with industry, which schools can visit and which also does outreach work in schools;
– Large technology fairs such as the Tech-expo in Hannover, which employers may pay to make it possible for schools to attend;
– Visits to local companies such as ZF, a major engineering employer in the Osnabrück area, and visits by companies to schools. An interesting feature is the use of apprentices to go into schools and tell pupils at first hand what they do.

Girls and STEM

There appear to be many initiatives, at local and at national level, to attract more girls into STEM, especially engineering, and to broaden the range of occupations that girls consider. The issue in Germany is a familiar one of occupational segregation with 71% of girls who take apprenticeships choosing those in only 20 out of 360 different types of offer. At higher education level there is a loss to employers of girls with STEM degrees who choose to apply them in teaching rather than industry. The main driver appears to be the need of employers for skilled people, supported by an equality agenda. Of particular note are the following examples:

– Girls' Day, whereby businesses, research centres and other institutions put on simultaneous open day events for girls, mainly aged 14–15. In 2013 this was held on 4th April and involved 108,000 girls and 9,200 events across Germany. Over 1 million girls have been involved since the initiative started 10 years ago. A wide range of partners are involved in organising these events, including employers, trade unions and trade associations as well as schools. It enjoys a good media profile, assisted by the involvement of Angela Merkel, herself a physics graduate. The aim is to show girls what it is like to work in some of the industries, particularly engineering, which are traditionally less popular for them. Girls apply for places at companies directly through the scheme either independently or with the support of their school. For the past three years, there have also been 'Boys' Days', to introduce boys to occupations such health and social care;
– 'Go-MINT', a national pact for women in MINT. Go-MINT is part of the federal government's qualification initiative and was launched in 2008 at the instigation of the Federal Ministry for Education and Research, with the aim of increasing young women's interest in scientific and technical degree courses and attracting female university graduates to careers in business. Pact members participate in a large number of individual interventions, including, for example, cyber-mentoring to give participants an intensive experience of STEM. We were told that Go-MINT has reached 436,000 females since it started, and that 69% of Go-MINT participants choose a career in STEM. The real strength of this approach is that it is employer-driven and links key employers with learning providers and policy makers.

Though evaluation evidence is limited, these initiatives are believed to be making a difference. Go-MINT data suggests that there have been clear increases in the number of girls choosing electrical engineering, physics and astronomy. Between 2010 and 2011, the proportion of females entering engineering courses increased by 19.7% and the proportion entering mathematics/science courses by 14%.

Career guidance

The federal government, the *Länder*, the municipalities, non-profit organisations and private providers all play a part in the career guidance system in Germany. Career education and guidance in school is the responsibility of the individual Land, but the Federal Employment Agency (FEA) network plays a critical part across the country (see next page).

Schools

Each of the 16 *Länder* makes its own arrangements, and there is wide diversity of provision. In schools, guidance is provided by specially trained teachers, social workers, school psychologists and by vocational guidance practitioners from the FEA. Career guidance activities within a school are coordinated by the Studien und Berufs Coordinator ('Stubo'), and we were told that much depends on the quality of the Stubo and school system within which they work. We were also told that a school will allocate anywhere between two and 12 hours per week for the Stubo role, depending upon the size of the school, and that some schools pay an additional allowance to the Stubo.

Schools incorporate Arbeitslehre (learning about the world of work) into the curriculum – either as a subject in its own right or integrated into other curriculum subjects. It is frequently complemented by extra-curricular activities that involve employer engagement such as internships and visits to enterprises as well as to the local Career Information Centre, BIZ.

Some municipalities have established special centres or institutions offering educational guidance. In addition, most *Länder* offer online information resources for parents and pupils.

Particular arrangements with Lower Saxony

In North Rhine-Westfalia (Bielefeld), there is a new strategy to develop a consistent offer to all pupils in whatever school regarding career information and advice – this is known as a compulsory quality standard. There are several policy drivers for this but, in particular, the need to prevent young people from dropping out of education and the labour market, and to ensure that local businesses have pupils who are developing the skills and interests in local jobs. This is targeted from age 14 (Grade 8), with, for example, a requirement for each child to spend three days in enterprises. The key principles are:

– Early onset, individual support for pupils beginning in Grade 8;
– Individual assessment of potential and skills;
– Individualised exploration of career fields;
– Recommendation of career and transition path;
– Optimal use of career orientation offers;
– Communal coordination.

Progress is developing at a different pace across the various commune areas. Each commune has a worker part paid by the State and part by the Municipality (in the case of Bielefeld). Their role is to build partnerships between schools and employers, with BIZ, and to encourage school principals to build a whole school approach to career orientation.

As in England, the success of this depends upon the active engagement of the school principal and the involvement of relevant partners.

Federal Employment Agency

Career guidance for youth and adults is a statutory requirement which is delivered by the FEA. FEA career counsellors visit schools, run class talks, and provide small-group guidance and short personal interviews in the penultimate year of compulsory schooling. These counsellors have generally undertaken a specialised three-year course of study at the Federal College of Public Administration and are a professional workforce.

School classes have a compulsory visit to the FEA's career information centres (BIZ) once in each student's career, where they are familiarised with the centre's facilities and follow a menu of activities depending on their future interest (university, apprenticeship, etc.). BIZ centres are usually co-located with the adult employment office. The BIZ centres we visited in Bielefeld and Osnabrück had a very wide range of exemplary paper and digital publications on different occupational areas. Psychometric profiling tests are also available at the centres to encourage young people to think about their own skills, preferences and styles of working.

BIZ counsellors might hold 'surgeries' or drop-ins at a school or alternatively pupils can subsequently re-visit the BIZ centre and book longer one-to-one career counselling interviews at the local employment office. We were told that the rate of uptake is critically dependent on the quality of the Stubo and can range from 20% to 95% of a year cohort accordingly. Careers counsellors are dedicated to particular schools, with a typical counsellor having responsibility for around five secondary schools. FEA advisers know their local employers' needs well and are in a position to advise pupils of the different working cultures and skills required within different local employers.

Labour market information is available at the sub-regional level (Kreis), being centrally produced by the FEA network headquarters in Nuremburg. FEA also runs a range of internet services including planet-beruf (www.planet-beruf.de), a career choice programme for lower secondary school pupils.

There are also a number of not-for-profit and private providers that have developed since the FEA monopoly on guidance was ended in 1998.

Different arrangements for different types of school

In the *Gymnasium* that we visited, 70% of pupils go to university and 30% into apprenticeships. The emphasis is on preparation for subject choice for the Abitur (A-level) and for university entrance. There were additional stresses within the school curriculum since the decision to reduce the school learning programme by a year, meaning that many pupils have to cram the same curriculum learning into a much shorter period of time. Cross-school career guidance activity is coordinated by the *Stubo* and a careers awareness programme is delivered by politics and economics teachers. Apart from work experience, external contact is oriented more towards universities than employers, with all pupils who are considering university making at least one visit. Careers fairs appear to be common. There appeared to be a greater emphasis on transition to a university course than a longer term career pathway.

The Vocational School of Osnabrück Administrative District – Brinkstraße (BBS) was a combined *Fachschule Technik, Berufliches Gymnasium Technik and Berufsfachschule Technik*. Here, where pupils are on apprenticeships or on full- or part-time vocational courses, the focus on employability skills and functional knowledge was strong. With links to employers, there are many opportunities for direct experience of the workplace. Even the full-time vocational courses have as their goal the placement of a student on an apprenticeship. With work so deeply embedded in the purpose of the vocational school, and with relations with employers so close, the need for explicit career guidance is limited, but the FEA is always available for those who need support or who are in danger of dropping out and becoming NEET (not in employment, education or training).

In the vocational school that we visited, we got a strong sense of a mission to make sure that no student is left without an apprenticeship, even if their secondary school had failed them. The boys we spoke to had clearly not been well supported by their previous schools as they had not been encouraged to apply for apprenticeships early enough, or effectively enough. One of the boys said that he would have liked more support but that he thought the school just wanted to get the kids out. He was supported by the FEA career service who advised him and accompanied him to look around the BBS school and then apply.

Work experience/Prakticum

Work experience is extensive and embedded in the German school system. Even in the *Gymnasia*, where the goal is generally understood to be university entrance, it is normal to have two weeks' experience, which (in the *Gymnasium* we visited) is arranged by the pupils themselves. In Realschulen it would be more than this – for example the boys at the BBS who we spoke to had each done two lots of two weeks in Grades 9 and 10.

In addition to formal work experience, there are many opportunities to experience the workplace through visits, and to hear about work from visitors to schools, who are often themselves trainees. These experiences are more common in Hauptschulen and (to a lesser extent) Realschulen.

Accountability

School accountability is light touch by English standards. Examination results are reported to the *Land*, but not published and there are no league tables. Inspection by the *Land* is only occasional (once in nearly ten years in the *Gymnasium* we visited).

EMERGING LESSONS FOR ENGLAND

The German school system is so different from the English that it is always going to be difficult to transfer practices directly. In particular, the excellent work-related practices associated with the dual system and employer links would be hard to transfer directly to the typical English comprehensive school. Furthermore, the treasured dual system of apprenticeships is highly attractive but a social, cultural and economic phenomenon with more than 100 years of history that cannot be created overnight or even in a decade.

Nevertheless, the over-riding principle lying behind Germany's most successful features is worth noting because aspects of it may be capable of adaptation. The deep principle is the close, trusting relationship between employers and the education system. Employers are committed not only to apprenticeships, but to a very wide range of activities with schools (especially those schools with the strongest vocational orientation). This commitment comes partly from a need to recruit skilled and qualified people, driven by shortages, and partly from a genuine sense of social responsibility. Employers do not rely on incentives or subsidies from government to get involved with schools and training providers.

Employer motivations were explained by Professor Schwartze:

"Employers get to know the young people for about three years, see how they work and – of course – after having them about one-and-a-half years, their work is starting to pay out for the company. They will always try to keep the best of them – some will stay, some will go to another company, others may go to school again. Later, some of them even come back as engineers after finishing university of applied sciences. The mechanical or electrical engineering study courses at the universities of applied sciences have a high percentage of students who finished their apprenticeships first and go to university afterwards (some of them coming from *Gymnasia,* more coming from the vocational school system). Companies are very interested in having this bundle of skills when hiring engineers."

The goal for England may be to transfer more responsibility to employers and reduce the expectation of government intervention, but this will not happen until employers believe they have good prospects of getting what they need from the system.

In Germany, the deep involvement of employers in education comes not only from the individual employer, but also from the strong networks such as the Chambers of Commerce and the Trade Associations, some of which exist in the UK, but not in such an embedded and pervasive way.

A second key feature of the German system is the professional service which is universally available to all young people and adults provided by the FEA. Their career advisers' knowledge of local areas, access to labour market information, and resources to help young people and parents to learn more about different occupations and educational pathways is exceptional. They have professionally qualified career advisers who are available to support anyone, and they have a highly visible presence so that they are accessible. Their challenge is getting meaningful access into schools to support young people. Where this does not happen, young people's access to information about careers (including STEM careers) and potential pathways to employment is mediated by their school. Some schools see this as an important priority – but not all. Nevertheless the presence of the BIZ centres is known to young people and they provide a place to go for advice if they are struggling to find employment or training options.

The following features of the German system may be capable of replication in England:

a) Although arrangements vary widely between *Länder*, there are features at a Federal level that provide stability and consistency. In particular, the FEA's career information centres (BIZ) are professionally staffed and have excellent resources for career guidance for schools, pupils and adults. Their advisers are focused on the needs of individual pupils as well as whole schools, and they have excellent knowledge of local and national employers.
b) Work experience is taken seriously in all schools and a minimum of two weeks is expected.
c) Apprentices and trainees are used to communicate directly with pupils when employers visit schools or schools visit workplaces.
d) Programmes to get more girls into STEM are vigorous with a national profile and they are professionally run. There are some good ideas that could potentially translate to England, in particular 'Girls' Day' and the 'Technikum' programme to give girls a six-month taster of STEM employment.
e) Careers fairs which are held in localities and organised through employer networks (including Chambers), and are open to all school pupils, provide a regular opportunity for pupils and parents to meet local employers.

HONG KONG

EVIDENCE GATHERING

This report has been written by John Holman and Jo Hutchinson and is based on the sources below. Further details are listed at the end of this Appendix.

a) Desk research.
b) A consultation seminar on 8th April 2013 in City University of Hong Kong with expert policy-makers, academics and Hong Kong Association of Careers Masters and Guidance Masters.
c) Half-day visits on 8th, 9th and 10th April 2013 to a senior secondary school and a vocational college, with a shorter visit to a private international school.
d) Further informal discussions with career specialists from university and secondary school.

OUTLINE OF EDUCATION IN HONG KONG

Hong Kong and its secondary education system

Hong Kong is a small tightly contained community of 7 million people. Its industrial profile has seen rapid change from domination by manufacturing industries in the 1960s and 1970s to the present day ubiquity of the service sector. Education reform has been driven at least in part, by a strategic need to adapt the school system developed for manufacturing skills to one that could continue to shape and grow the service sector.[13] Other drivers have been the need to move on from the British colonial education system and to provide routes that suit all learners.

The current and future role of mainland China is a significant preoccupation for those involved in Hong Kong education from primary school through to university. There are concerns around China's long-term policy intentions, and anxieties about competition from the increasing numbers of highly educated mainland Chinese.

The old system was characterised by selectivity on the basis of attainment in examinations, competition for places, and inequality of access, with those parents with financial resources being able to buy places at private schools. Reforms have been introduced aiming to move on from the old colonial system, reject elitism and encourage social mobility, although in reality the new system continues to have strong de facto selection. Independent international schools are very popular with better-off parents, both Chinese and expatriate, and the government gives these schools generous incentives to build capacity.

The new '3+3+4' system enacted in 2009 comprises:

– Junior secondary education – three years from Secondary 1 to 3 at ages 12–15;
– Senior secondary education – three years from Secondary 4 to 6 at ages 15–18;
– University education – four years tertiary for undergraduate degrees.

The new reforms have reduced the number of critical entry examinations from three to one (the Hong Kong Diploma of Senior Education, taken at age 18). Principals of primary schools can still select pupils, but a much lower percentage (20%), with more being state-allocated (35%). Secondary schools still band pupils by ability (reduced from five to three ability bands). Other reforms included 'Through Train' schools to link primary and secondary schools to maintain a coherent curriculum, with the expectation that all pupils from the primary will go through to the secondary (and implications for their ability to select).

[13] Education reform was led by Arthur Li, a member of the Education Commission and former VC of the Chinese University of Hong Kong; and Anthony Leung, former Financial Secretary of Hong Kong.

Curriculum reform

Overview

The new system had a curriculum framework to achieve seven learning objectives which were designed to encourage whole person development. The sixth of these objectives was that all pupils should "understand their own career/academic aspirations and develop positive attitudes towards work and learning".

Changes were announced in May 2005 in order to allow time for pupils to commence with the Secondary 4 cohort in September 2009. This cohort became the first Secondary 6 pupils to complete the new Hong Kong Diploma of Secondary Education (HKDSE) in May 2012. 82,000 pupils were entered for the examination in May 2013; 73,000 in May 2012.

The new secondary curriculum comprises core subjects (Chinese, English, maths and liberal studies) and elective subjects, with a total of 20 senior secondary subjects, a wide range of 'applied learning' courses and six other languages, opening up a number of pathways into further studies and careers. Unlike the English system, sciences are not included among the core subjects.

Other Learning Experiences (OLE)

OLE are included alongside the core subjects in the curriculum. OLE has some similarities to Personal, Social and Health Education (PSHE) in English schools, and – importantly for this study – includes an element of careers education and a suggestion that OLE occupy 5% of curriculum time (135 hours). The introduction of the new curriculum has therefore brought with it a statutory obligation to include careers education.

Higher education

The process of reforming Hong Kong's higher education sector commenced in 2001, and encouraged mass participation. Within five years, the post-secondary participation rate for the 17–20 age cohort had increased to 66% with enrolment of first-year first degree pupils comprising over 20% of pupils in their age cohort in 2011/12 compared with 5% in the mid-1980s.

Banding of schools

Secondary schools are banded under the new system (although the number of bands has been reduced from five to three). The criteria for banding include the examination performance of pupils in the previous two years assessed by a pre-Secondary 1 streaming test taken in the primary school. Band 1 schools receive higher funding and are highly sought after, and have a more academic focus, while Band 3 schools have a more vocational focus. However, there is no clear-cut division between Band 3 academic and pre-vocational schools. We were told that parents have little interest in vocational education: their overwhelming motivation is for their children to enter a high band secondary school and enter a top university.

A small proportion of pupils go from secondary school to the vocational training and education (VTE) institutions such as Chai Wan, which we visited. On average 13,000 are enrolled by VTE institutions annually. In such institutions, the curriculum is strongly vocational and there is a keen commitment to getting pupils, who are widely seen as having failed in secondary education, into employment.

The motivation of parents and pupils towards education is very strong throughout Hong Kong society and competition strongly influences the behaviour of parents and schools.

RELEVANT FINDINGS

STEM

In Hong Kong we found no evidence of a 'STEM agenda', driven by a need to get more pupils into STEM subjects, such as is found in the UK. Science and maths are already preferred subjects within Hong Kong, partly because of their high prestige and partly because they provide more choices at university. Pupils need no encouragement to take them. Furthermore, in this largely service economy, the need to get more people with STEM skills to drive the knowledge economy is less of a priority than in the UK and many Western countries.

Prior to the education reforms, pupils were streamed into three pathways – science, business and arts – during the third year of secondary school. The higher achieving pupils were routed through the science pathways, with the lowest being routed into arts. An emphasis on maths has survived the transition to the new system intact with maths being a core subject at senior secondary. Pupils are able to choose biology, chemistry, physics or integrated science as one of their two or three remaining options.

Any deficiencies in STEM-related skills in the Hong Kong market are more likely to be addressed by the relevant Trade Board than by direct intervention from policy makers. Each Trade Board has an advisory board of employers, academics and training providers who will address the issue in a pragmatic way, such as the development of apprenticeships or scholarships, raising wages or using partnerships with learning providers to develop courses and relevant curricula. These measures are partly effective at overcoming skill shortages, although the employers we met still perceive young people to be disproportionately attracted to working in easier, less risky and better paid opportunities in commerce and retail.

Career guidance

The in-school career curriculum

The education reforms created both an opportunity and an expectation for career guidance in secondary schools in Hong Kong. There were now more options open to pupils and so this created an expectation that young people would require support in their choice of subject, or in their take up of Applied Learning, or in the wider opportunities for vocational courses. There was also an opportunity to create a career guidance curriculum for both junior and secondary school pupils and to build this into the 'Other Learning Experiences' element of the curriculum. The career guidance team at the Education Bureau seconded the President of the professional association, the Hong Kong Association of Careers Masters and Guidance Masters (HKACMGM),[14] to their team over the period of a year. They produced a set of recommendations which do not have statutory authority, but which underpin the inspection framework (inspections are undertaken by a Quality Assurance Officer from the Education Bureau).

The recommendations should be read alongside 'The Future is Now: from vision to realisation', which is a set of guidelines developed by the Education Bureau on all aspects of the education reform and available in both hard copy and on their website (http://cd1.edb.hkedcity.net/cd/cns/sscg_web/html/english/main07.html). They provide a set of objectives for career guidance in school and establish a common language. The recommendations include a set of six principles that are provided to schools, which assisting pupils to manage and adapt to transitions from school. They clearly state that career guidance should be provided to all pupils.

The recommendations also offer advice on how schools should plan and implement a comprehensive career guidance service. They provide a set of role descriptors for those involved which include: career information officer, career counsellor, career consultant, career coordinator and career educator. They offer advice onbuilding and maintaining quality school-based career guidance by using the Planning – Implementation – Evaluation cycle in school documented in the School Self-Evaluation cycle as advocated in the School Development and Accountability Framework. They also advise on the amount of resources needed in terms of manpower, physical space and time.

While the recommendations provide a clear and practical framework for the development of career guidance in Hong Kong, their implementation is at the discretion of the school principal[15], and there is no overall assessment available of the extent to which schools have adopted them based on either inspection reports or any other source of data. Schools have nevertheless been supported in their implementation in two key ways:

[14] Despite its name, membership is open to both females and males.
[15] There is a requirement for the principal to allocate a minimum of HK$ 20,000 (about £2,000) per year to career guidance.

Firstly, teachers can access training in career guidance either through a 100-hour taught programme with an accreditation recognised by the Education Bureau, or through shorter intensive training offered by the professional association. The 100-hour course is free to teachers although they have to find the time to study outside of their school commitments. There are about 70 graduates each year. Secondly, schools were initially provided free of charge with a booklet for their junior school pupils prepared by the HKACMGM called 'Finding your colours of life', which provided a complete curriculum. In addition, the Association has developed a secondary school booklet, 'Career Mapping', which extends the learning programme into the senior secondary school. Schools have to buy these – so far 42,000 have been sold.

All schools have a 'Career Master'[16] who leads a Careers Committee (or team of teachers). The numbers of teachers within the committees vary from two to nine. They will not necessarily have been through the 100-hour training although it seems likely that each school has had at least one teacher graduate through that programme.

According to HKACMGM, each career team is required to submit an annual report to their principal. This provides an account of their activity and how it contributes to meeting the learning objectives set by the Education Bureau. This is helpful for the school self-evaluation and for the external inspection.

We saw little use of online technology to support career guidance in Hong Kong.

The career support infrastructure

Most of the careers content within school is delivered by teachers. However, there is what is referred to as a 'loosely coupled system' of support around schools which they can draw on. Consequently the Education Bureau supports schools through the:

– Career Guidance Team;
– Applied Learning Section;
– Curriculum Development Institute;
– Lifewide learning section;
– Home school collaboration (which supports workplace visits).

In addition, the Labour Department runs 'Youth Employment Start' (YES) for 14–30-year-olds – this focuses on employability. They are also responsible for apprenticeships which have been part of the opportunity mix in Hong Kong for 20 years – although the numbers entering apprenticeships each year is only 1,900. The Labour Department is also responsible for JUPAS which is the equivalent of UCAS.

Non-government organisations (NGOs) offer widely used additional resources to schools. For example, the Anglican Family Welfare Association offers a 'mock results release day' workshop and a 'life stage assimilation game' (a day-long activity broadly comparable to The Real Game); the Salvation Army organises work experience and placements; while the HKACMGM have run a summer work experience school for 30 years. In-school social workers provided by NGOs play a significant part in career guidance in the secondary sector, providing extra-curricular guidance opportunities alongside pastoral support.

The HKACMGM is the significant careers organisation in Hong Kong. It was established in 1959 and has membership of 410 secondary schools – 90% of the total. It has a close relationship with the Education Bureau, which seems to work well.

Community support for career guidance, from parents, alumni, employers, professional and trade bodies is common and positive.

[16] Who may be male or female.

Career curriculum content

The Education Bureau recommendations, the HKACMGM and vocational and higher education careers services all emphasise the development of the 'whole person'. Indeed the careers programme at IVE, the vocational college that we visited, was called the 'Structured Whole Person Development Programme'. The development of the whole person is something that is treated seriously by college and school principals, their careers staff and pupils alike. The programmes that we were told about blend self-awareness, interpersonal skills such as leadership and 'emotional intelligence', ethics, mental well-being and other employability skills.

Work experience does not feature strongly in the lives of young Hong Kong people. It is largely absent from their career development programmes in school, there are few opportunities for part-time employment while they are still at school, and there are family expectations that they need to study hard at school and not be distracted by work. Those opportunities for work experience that do exist are limited and consequently are subject to competition. However, we recognise that there may be more exposure to work offered in Band 3 schools and through programmes of applied learning. Most learning about work happens after secondary school.

We saw little evidence of the use of labour market information to inform career guidance.

Finally, it is worth noting the experience of Kellett Secondary School, an independent British international school which has had to devise their careers programme from zero. The teacher with responsibility for careers has drawn resources from the UK-based Futurewise/Inspiring Futures (the Independent Schools Careers Organisation), Careers TV and parents to provide a programme of career guidance that is strongly focused on career choice, university choice and subject choice. Key learnings from their experience were:

- They have commissioned a full service from Futurewise for their pupils including one-to-one guidance from an external careers adviser, and a helpline for the careers teacher to use whenever she has an information need;
- Even highly motivated parents who invest significant sums of money into their children's education are often not proactive in careers support, and the school's careers education programme is as much targeted at parents as at pupils.

EMERGING LESSONS FOR ENGLAND

Although the Hong Kong education system was based on an English model, the recent changes and its geo-political context make it very different to England. Above all, there is universal commitment to education by parents which means the government needs to intervene very little to drive school improvement. External inspection is minimal and explicit league tables do not exist. In this entrepreneurial, market-oriented society, it is parental demand that drives school improvement. Nevertheless, the following points are of particular interest to our study:

a) The government recommendations concerning career guidance are based on the curriculum framework and are well developed, clearly articulated and practical. They provide a clear and unchanging model against which schools can, and do, develop their programmes and assess their impacts. They are not prescriptive: schools have shaped their implementation differently, but they are well understood and set an expectation for career guidance in every school.
b) Even in this society which is so strongly supportive of education and where parents are highly motivated to ensure their children achieve, parents do not in general demand good career guidance of their school principals. Career guidance is not a motivating factor for parents although lack of career guidance could emerge as a problem for parents over time.
c) Where labour market shortages exist they are tackled in a proactive way by employers who have good partnership links with both higher and vocational education and will use the levers at their disposal to encourage the development of the skills they need.

IRELAND

EVIDENCE GATHERING

This report has been written by John Holman and is based on the sources below. Further details are listed at the end of this Appendix.

a) Desk research.
b) Visits on 4th and 5th December 2013 to:
   – St Mary's Secondary School, Glasnevin, Dublin;
   – National Centre for Guidance in Education;
   – National Council for Curriculum and Assessment.

OUTLINE OF EDUCATION IN IRELAND

Ireland and its education system

Ireland is a small country with a population of 4.8 million and a modern, trade-dependent economy. The financial crisis of 2008 hit the Irish economy hard, leading to drastic cuts in public spending. Nevertheless, Irish education is successful by international standards, and in the 2012 PISA tests Irish 15-year-olds comfortably outperformed those in all parts of the UK in mathematics, English and science.

Until quite recently, the education system was dominated by the Roman Catholic Church, with many schools run by religious orders. Although this is still a characteristic of the ethos of many schools, the education system is now essentially run by lay people and is more secular in its focus.

Schools may be either completely free, or to some extent fee-paying, though even the latter receive the majority of their funding from the state. Thus the system essentially operates under a single state-mandated framework, though the diversity of school types is wide. In particular, there are:

– Voluntary schools, often owned by religious orders, which traditionally offer a more general academic education (57% of schools);
– Community colleges (formerly called vocational schools) which offer vocationally oriented programmes (31% of schools);
– Community comprehensive schools, usually secular foundations, which offer a range of academic, technical and vocational programmes (12% of schools).

In secondary schools there are two cycles:

– Junior cycle (Years 1 to 3, ages 12–16), at the end of which is the Junior Certificate;
– Senior cycle (Years 5 and 6, ages 16–18), at the end of which is the Leaving Certificate.

The only core requirements for Junior and Leaving Certificates are Irish, English and mathematics. At present, the Junior Certificate is externally examined, but will soon become teacher-assessed as part of a move to emphasise age 18 as the normal completion of education. The Leaving Certificate is, and will remain, externally examined.

An unusual and imaginative feature is the optional year four Transition Year (TY) between the Junior and Senior cycles, taken by about two-thirds of pupils in the school I visited. During this year the regular curriculum is replaced by a year of preparation for life beyond school, involving work experience, personal skills development, visits to university and businesses, enterprise education, overseas visits etc., arranged by the school. Much of an Irish student's career preparation will depend on whether they have taken the TY. In the school I visited, there was a selection process before pupils were admitted to TY, to test their commitment to stick with the less structured format of the year.

Accountability

There are no official government league tables, though the *Irish Times* publishes tables of Leaving Cert performance for all schools.

Within the Department of Education, the Inspectorate has traditionally inspected schools on a subject-by-subject basis, but increasingly inspections are whole-school and schools are expected to carry out their own self-evaluation. There are also drop-in inspections that may be triggered by parental concerns. A section of the Inspectorate is responsible for guidance.

RELEVANT FINDINGS

STEM

Like the UK, Ireland values STEM education as an essential underpinning of its modern economy. In particular, mathematics is seen as a critical subject and from 2009 the National Council for Curriculum and Assessment initiated a major project to transform standards in mathematics in secondary schools. It is too early to tell whether this has been successful, though the 2012 PISA results suggest it has.

In November 2013 the importance of STEM to Ireland's economy was recognised by the Minister for Research and Innovation, Seán Sherlock, TD, announcing the launch of a STEM Education Review Group. The review group aims to map existing STEM education initiatives in Ireland. Currently the main STEM education engagement activity is through the Discover Science & Engineering (DSE) programme which is Ireland's national science awareness programme for STEM education. The programme was developed to increase interest in science and encourage young people to consider science as a viable career option. Its overall objectives are:

– To raise the general level of awareness of the physical sciences;
– To raise the level of student uptake of the physical sciences at second and third level;
– To promote a positive attitude towards careers in science, engineering and technology; and
– To promote a greater understanding of science amongst the public and society.

Career guidance

The key elements in schools

Career guidance is intimately tied in with the guidance counselling system, which is embedded in most Irish schools. Under the national curriculum, schools are expected to have a whole-school guidance plan.

Guidance counselling

Guidance counsellors are at the heart of the school's career guidance work, and indeed of the pastoral system as a whole. Qualified counsellors have both a teaching qualification and a guidance qualification at graduate diploma and/or master's level. Guidance counsellors may have a subject teaching obligation alongside their guidance work.

Until September 2012, schools had an 'ex-quota allocation' beyond the funding they received for regular teachers, to employ a defined number of guidance counsellors (one per 500 pupils). This meant that all secondary schools were provided with counsellors. However, in 2011 this funding was removed as part of a programme of budget cuts, and school principals had to fund their guidance provision from within their core allocation, with latitude about the extent to which they did so. This meant they had to decide whether they wished to maintain the numbers of counsellors or, for example, increase the teaching hours of counsellors, so reducing their guidance hours. It appears that despite these cuts, most schools have maintained at least one guidance counsellor on their staff.

The cuts have supported an existing trend away from the counsellor as an individual operating in relative isolation and towards a whole-school approach to guidance, in which the senior counsellor plays the leading role in a team which includes form tutors and (in religious foundations) the chaplain and perhaps nuns and brothers. While this may be seen as reducing the professionalism of counselling, it has the advantage of giving the whole school more of a feeling of responsibility for careers guidance.

Typically, a guidance counsellor carries out the below activities, some of which might be covered by other members of the guidance team. The guidance team is likely to include tutors and perhaps the school chaplain as well as professional counsellors.

– Induction sessions for pupils on arrival at secondary school (and before this, visits to their primary schools);
– One-to-one guidance sessions with individual pupils on a drop-in basis, or by referral from other members of staff. These sessions may be for counselling on personal or social issues (an important part of the role), or to help with subject choice and, in the final year, with university or college application. Pupils in the final year of secondary would have at least one such session, but sessions are available throughout secondary school;
– Teaching careers classes, as part of a cycle of Social, Personal and Health Education (SPHE);
– Providing guidance at parents' evenings;
– Directing pupils to sources of information about careers;
– Teaching on the Transition Year programme and coordinating work experience activities;
– Organising pupils' attendance at regional careers fairs (in transition year, or in the final years of senior secondary);
– Organising visiting speakers, for example from universities;
– Organising 'differential aptitude tests' (DATs) in Year 3 and giving feedback to inform subject choices for senior secondary;
– Organising 'careers interest inventory' testing and follow-up;
– Directing pupils towards sources of information on the labour market and university and college choices;[17]
– Making arrangements for university and further education college application through the UCAS and CAO (Central Applications Office) processes;
– Normally, advising pupils after the Leaving Certificate results come out (though this is not obligatory under their contract).

A typical set of experiences in secondary school

A student would typically have, during Junior Cycle:

– Induction;
– Careers lessons as part of the SPHE cycle, including study skills and preparation for subject choices;
– Opportunities for one-to-one guidance if needed;
– In Year 3, differential aptitude tests to inform subject choice for the upper-secondary cycle.

In Transition Year, if taken:

– A range of work-related experiences, including two weeks of work placement in two different settings; visits to universities and further education colleges; modules on CV writing; preparation for, and follow up to, work experience; visits to businesses and visiting speakers.

In Senior Cycle:

– Careers lessons as part of the SPHE cycle, including study skills and preparation for university and college choices;
– Opportunities for one-to-one guidance if needed (normally every student would have at least one session in Year 6, as they prepare for university or college application, apprenticeship or job applications);
– Visiting speakers, university and college visits, and careers fair visits.

[17] For example, Careers Portal (careersportal.ie) has detailed data on jobs, qualifications and salaries. It is a privately organised subscription service with state funding.

EMERGING LESSONS FOR ENGLAND

Ireland is a good comparator for England. Although it has a smaller and more homogeneous population, it is culturally similar; what is more, it has an education system that has emerged from the financial crisis stronger than it went in, and is (judging by PISA) one of the most successful in Europe.

That said, the heart of the career guidance approach is the Guidance Counsellor system, which could not readily be translated into the English system. There are, though, some specific aspects of the Irish approach from which England can learn:

a) The whole-school approach now being taken by most Irish secondary schools, and the requirement for each school to have a 'guidance plan'.
b) The availability of one-to-one professional career guidance interviews for every student.
c) The integration of guidance into the mainstream pastoral and academic systems of the school, meaning it is not regarded as a dispensable extra.
d) The Transition Year has a number of elements which represent excellent practice and lend themselves well to the construction of benchmarks – in particular, the two weeks of work experience (with accompanying preparation and debriefing), the encounters with employers, and the visits to universities and colleges. The flaw in the otherwise excellent Transition Year concept is that it is optional.
e) An interesting idea that I have not come across before is that of a national career competition in which pupils compete for the quality of their career planning.

THE NETHERLANDS

EVIDENCE GATHERING

This report has been written by John Holman and Tony Watts and is based on the sources below. Further details are listed at the end of this Appendix.

a) Desk research.
b) A consultation seminar on 18th February 2013 in Utrecht with expert policy-makers, academics and leaders of initiatives from across the Netherlands.
c) Half-day visits in the Breda area to a pre-vocational school, a vocational college and a general secondary school on 19th and 20th February 2013.

OUTLINE OF EDUCATION IN THE NETHERLANDS

Most children start primary school at the age of four, although they are not required by law to attend school until the age of five. On leaving primary school at the age of about 12 (after eight years of primary schooling), children choose between three types of secondary education: VMBO (pre-vocational secondary education; four years), HAVO (senior general secondary education; five years) and VWO (pre-university education; six years). VMBO is a type of secondary education introduced in the 1999/2000 school year.

There are four learning pathways in VMBO:

– Basic vocational programme (vmbo–bb);
– Middle-management vocational programme (vmbo–kb);
– Combined programme (vmbo–gt);
– Theoretical programme (vmbo–t).

In HAVO and VWO, pupils have to choose in Year 3 or 4 one out of four 'Profiles': Culture and Society; Economy and Society; Science and Technology; or Science and Health.

Most secondary schools are combined schools offering several types of secondary education so that pupils can transfer easily from one type to another. All three types of secondary education start with a period of basic secondary education, during which all pupils study a broad range of subjects that is virtually the same at all types of school. HAVO and VWO pupils study three modern languages, while pupils in VMBO study two. The period of basic secondary education varies in length from one type of school to another, but lasts at least two years (as in the case of VMBO) and usually three.

After completing VMBO at the age of around 16, pupils can go on to secondary vocational education (MBO). Pupils who have successfully completed the theoretical programme within VMBO can also go on to HAVO. HAVO certificate-holders and VWO certificate-holders can opt at the ages of around 17 and 18 respectively to go on to higher education. HAVO is designed to prepare pupils for higher professional education (HBO). In practice, however, many HAVO school leavers also go on to VWO and secondary vocational education. Only VWO certificate-holders can go straight to university. In practice, many of them also enter higher professional education. MBO certificate-holders can also go on to higher professional education.

Secondary and tertiary education in the Netherlands is highly selective and structured. After primary school, pupils transfer to one of three secondary streams: pre-university (VWO), general academic (HAVO) and pre-vocational (VMBO). The stream that they enter is mainly determined by their performance in a national test.

VWO and HAVO pupils are usually taught as separate streams in the same school, which may also include a VMBO stream. VMBO pupils may on the other hand attend a completely different school dedicated to pre-vocational education. Within the VMBO stream, there are varying blends of general academic and pre-vocational education, depending on pupils' age, interests and aptitudes[18].

After school, VWO pupils usually go to an academic university; HAVO pupils to a technical university (HBO); and VMBO pupils to a vocational college (MBO – like a further education college) to prepare for a specific job. Of course, there are exceptions to all these rules, and transfer between the streams is possible (though usually involves additional time).

The Netherlands' schools are very different from the norm of English comprehensive schools. The nearest the Netherlands has to our comprehensive schools are those schools which include VWO, HAVO and VMBO streams in a single establishment. However, even here the streams are taught completely separately.

All schools have a statutory obligation to provide 'career exploration and guidance', loopbaanoriëntatie en-begeleiding (LOB), though they have no ring-fenced funding to do so, and there is no external monitoring of quality beyond a general inspection. This highly delegated approach is similar to the current situation in England.

RELEVANT FINDINGS

STEM

The Netherlands has had a 'STEM agenda', broadly similar to that in the UK, for over a decade. The arguments go like this: for a developed country such as the Netherlands, the strongest areas of economic growth will be in the knowledge economy and the higher technology sectors, where growth depends on a strong supply of well-trained people at both graduate and non-graduate levels; therefore the economy needs more young people to make choices that lead to STEM qualifications. We were told in the seminar that they need to double the numbers going into STEM at all levels.

As well as needing more STEM-qualified people overall, there are problems of under-participation by certain groups. As in the UK, females are strikingly under-represented in certain subjects such as physics and engineering.[19] We were also told that ethnic minorities tend to avoid technical subjects in favour of finance and business, because they often associate technical subjects with parents' low-level jobs from which they want their children to escape.

An influential analysis has been the Bèta Mentality model, based on empirical data. This indicates that 31% of young people are 'high techs' (intrinsically attracted by STEM) and 13% 'non techs' (unlikely to be attracted by STEM in any circumstances), and that the potential for growth in STEM recruitment is among the 28% who are 'career techs' (open to attraction by career possibilities) and the 28% who are 'socially-minded generalists' (open to attraction by social relevance).[20] This analysis is particularly relevant to girls, who are much more likely to fall into the latter groups than into the 'high techs' group. It has implications for how STEM subjects are taught and how they are marketed, and for the role of career exploration and guidance as an important element in boosting STEM participation. STEM subject choices are often perceived as difficult, which is a reason for avoiding them; showing the wide range of careers to which STEM qualifications can lead is a way of motivating pupils to choose them.

STEM initiatives

Most of the major national-level initiatives to improve participation in STEM seem to fall into the category of 'enhancement and enrichment', with fewer initiatives related to the curriculum or the supply and quality of teachers. 'Platform Beta Techniek' and 'Jet-net' are government initiatives to improve links between schools and industry and to get employers into schools, and school pupils into the workplace[21]. These seem to be growing strongly and it would be worth exploring whether they have any lessons for similar organisations in the UK, particularly STEMNET.

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[18] The more academic sub-streams within VMBO are sometimes called MAVO.
[19] Booy, C., Jansen, N., Joukes, G. & van Schaik, E. (2012). *Trend Analysis: Gender in STEM Higher Education*. Amsterdam: VHTO.
[20] Motivaction & YoungWorks (2010). *Bèta Mentality 2011–2016: Attracting Young People to Science and Technology*. Den Haag: Platform Bèta Techniek.
[21] www.platformbetatechniek.nl/english.html and www.jet-net.nl/?pid=76

VHTO, a national organisation looking to increase the involvement of girls and women in science and technology, has a similar role to that of 'Women into Science and Technology (WISE)' in the UK. It seems a dynamic organisation with good reach into schools through innovative ideas such as 'speed-dating' (small groups of female pupils rotating between a number of female role models), and it would be worth exploring whether they have any lessons for similar organisations in the UK.

'Technasium' is a bottom-up nationwide programme to get open-ended, real-life projects embedded within VWO-HAVO schools – we saw an example at Newman College, Breda[22]. There are 14 Technasium networks in the country, comprising about 75 schools in all. Pupils who opt for Technasium spend nearly 20% of their curriculum time working on 'real life' problems posed by companies or institutes; this includes a day in the company and a visit to the school from company representatives. The culmination is a presentation of findings to the company that set the problem; universities are usually also involved. Pupils may develop their project into their 'masterpiece', or Profielwerkstuk, which is an 80-hour extended project carried out by all general education pupils in their final school year.

We have not seen any evaluation of this programme but it seems to have strong potential for developing problem-solving and enterprise skills as well as linking STEM to the world of work. It could also include career orientation potential, though this does not appear to be harnessed in the current design.

Career guidance

From what we saw and were told, parents and families are the largest influence on career choices, with subject teachers and tutors[23] identified as additional influences.

The pre-vocational VMBO schools and the vocational MBO colleges have a very different approach to career guidance from the VWO–HAVO schools which prepare pupils mainly for university.

Pre-vocational schools and vocational colleges

By their nature these institutions focus strongly on work-related learning: indeed, in the MBO colleges pupils are likely to spend a significant amount of their time in workplaces; a minority are work-based apprentices on day release. Pupils are encouraged to think carefully about their vocations, and they have a number of opportunities to experience different working environments at first- or second-hand, partly to help them to prepare for the choices that the course structure requires. There is also a growing emphasis on training teachers in reflection processes, to translate experience into learning. In the schools we visited, links with local employers appeared to be very strong, giving the programmes authenticity. In the MBO colleges, this is reinforced by the use of highly specific qualification handbooks, one for each of more than 100 sectors, which have been jointly prepared by employers, teachers and ministry officials. While they may be seen as restrictive, they provide great clarity on what pupils are expected to learn, based substantially on what employers want.

In these pre-vocational and vocational schools, career guidance is likely to be embedded throughout the school or college: it is linked closely to their reason for being and pervades the curriculum, teaching and pastoral support. As pupils progress through the system, there is reducing emphasis on general education and more on vocational specialisms. This extends to pastoral support: in early years tutors are appointed from among general teachers; later they are vocational teachers.

There is some excellent practice in these schools and colleges but because there is no English equivalent of the pre-vocational VMBO school, it is more difficult to find practice that will readily translate to our school system (practice in the vocational HBO-MBO colleges is more relevant to the English further education system).

[22] www.technasium.nl/downloadfiles/technasium%20(english%20flyer).pdf
[23] Tutors are also known as 'mentors': they are similar to class tutors in England.

General academic VWO–HAVO schools

These schools are more focused on university applications – career guidance and work-related learning seem to be much less embedded than in the pre-vocational schools. Guidance tends to be oriented to study choices and to be concentrated at the key decision points in Year 3 and in the final year (Year 5 in HAVO, Year 6 in VWO), when there is strong interaction between pupils and their tutors. In this sense, these schools are closer to practice in many English comprehensive schools.

Career guidance programmes are usually planned by the schooldekaan (careers coordinator). The traditional role of this person was to provide information and one-to-one advice; it was often a late-career promotion (with its own office). But the role in some schools is changing (particularly among younger schooldekanen) towards that of coordinator of career guidance activities across the school. In a number of cases, careers professionals from outside schools have been appointed, on a full-time rather than part-time basis.

Activities include:

- Provision of information (increasingly through websites);
- Provision of one-to-one guidance;
- Coordination of careers activities by the team of tutors, including some active contributions to tutorial sessions;
- Facilitating school-industry links.

Much of this is broadly similar to what is happening in English schools. Interestingly, however, the notion that schools would buy specialist guidance services from the former regional guidance offices (AOBs – which are equivalent to the former Careers/Connexions Service in England, though with a stronger focus on assessment) has largely been abandoned, and most of the AOBs have now disappeared.

There is far less work-related learning in the general academic schools than in the pre-vocational and vocational schools, and in particular there seems to be little if any work experience available. The use of labour market information in career guidance is undeveloped.

Incentives and accountability systems

Schools in the Netherlands are under pressure to perform in examinations, though perhaps somewhat less so than in England. School principals, particularly in the more academic VWO and HAVO schools, tend to prioritise exam results at the expense of less quantifiable outcomes such as student destinations and employability.

Nevertheless, there is some interesting work going on to broaden the accountability measures beyond examination results. The Vensters voor Verantwoording (Window of Accountability) has been produced by the Dutch Council of Secondary Education[24] , providing a readily-understood dashboard of around 20 performance indicators, some of which use data provided by the Ministry, some using local data from the school.[25] Several indicators relate to examination results, but others are more general: for example, there is a student satisfaction indicator. It is easy to imagine how an indicator of quality of career guidance could be added to this dashboard. This has not yet been done, but a useful audit tool, the LOB Scan, has been produced by the same Dutch Council of Secondary Education to enable schools to benchmark their career education, information and guidance provision in four different areas: vision and policy; exploration and guidance (including content and learning environment); organisation; and cooperation (with parents and external parties).

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[24] The Secondary Education Council, VO–Raad, is a group made up of the principals and boards for all the VWO–HAVO schools in the Netherlands. There are similar councils for other types of schools. There is no English equivalent to these councils, which seem to serve a valuable purpose in securing consensus for action among school leaders. www.vo-raad.nl/contact-helpdesk/english-summary

[25] An example of this dashboard: http://wiki.schoolvo.nl/info/venster/www.schoolvo.nl/index.html

EMERGING LESSONS FOR ENGLAND

The school system in the Netherlands is so different from the English that it is always going to be difficult to transfer directly. In particular, the excellent work-related practices and employer links in the pre-vocational schools would be hard to transfer directly to a typical English comprehensive school.

What is more, the system in the Netherlands suffers from some of the same pressures that English schools are under: pressure to perform in examinations, and a policy to delegate spending and decisions on career guidance to the school-level, without quality-control measures to monitor the results.

Nevertheless, we have found some features that are significant for our international benchmarking project:

a) In some schools (especially the pre-vocational schools), there is an embedded, school-wide programme for career guidance that pervades the curriculum, extra-curricular activities and the pastoral system. Such programmes, coordinated by the schooldekaan, are supported and valued by school principals as a central part of the school's mission. This systematic, school-wide approach could be translated to English schools if headteachers had the right incentives.
b) In many schools (especially the pre-vocational and vocational schools, less so the general academic schools), there are strong relations with local employers, making it possible for schools to provide a variety of work-related experiences.
c) The extended industry-related project work found in the Technasium programme and in some pupils' 'masterpieces' is interesting. Elements of this could translate to the Extended Project Qualification framework in England.
d) The 'Windows of Accountability' initiative has possibilities for extending the basket of accountability measures to include a measure relating to career guidance. The LOB Scan provides an interesting example of a self-audit measure on careers provision which supports accountability, transparency and school improvement.
e) There may be lessons to be learned from the enrichment activities of Platform Beta Techniek and VHTO that are of relevance to their equivalent organisations in the UK (STEMNET and WISE).

SOURCES OF EVIDENCE

CANADA, ONTARIO

Key reports and resources

CERIC (2012). *Canadian Career Development Research: 2000–2012. Literature Search (Updated September 19, 2012).* Toronto: CERIC.

Fullan, M. (2013). *Great to Excellent: Launching the next stage of Ontario's education agenda.*

Mishagina, N. (2012). *The State of STEM Labour Markets in Canada: Literature Review.* Montreal: CIANO.

Organisation for Economic Co-operation and Development (2002). *Review of Career Guidance Policies: Canada Country Note.* Paris: OECD.

Meetings with experts

Christopher Usih, Toronto District School Board

George Mavraganis, Principal, SATEC

Jacquie Latham, Ontario School Counsellors' Association

Lorraine Godden, Researcher, Queens University

Mars Bloch, Let's Talk Science

Ron Felsen, Principal, Northern Secondary School

Sandra Bickford, Ontario Ministry of Education

Sareena Hopkins and Donalee Bell, Canadian Career Development Foundation

Sheryl Freeman, Principal, Central Technical School

FINLAND

Key reports and resources

Cedefop (2008). *From Policy to Practice: A Systemic Change to Lifelong Guidance in Europe.* Luxembourg: Office for Official Publications of the European Communities.

Centre for International Mobility (CIMO) (2007). *Educational and Vocational Guidance in Finland.* Helsinki: Ministry of Labour.

CIMO (2012). *Lifelong Guidance in Finland.* Helsinki: Ministry of Employment and the Economy.

CIMO (n.d.). *Finland in Focus: Towards 2020 in Vocational Education and Training.* Helsinki: Ministry of Employment and the Economy.

Dobson, I.R. (n.d.). *Consultant Report – Securing Australia's Future STEM: Country Comparisons… a critical examination of existing solutions to the STEM skills shortage in comparable [European] countries – Country report: Finland.*

Kasurinen, H. & Vuorinen, R. (2002). *OECD Review of Career Guidance Policies. Finland National Questionnaire.* Paris: OECD.

Kupiainen, S., Hautamäki j., and Karjala, T. (2009). *The Finnish Education System and PISA*. Helsinki: Ministry of Education Publications.

Organisation for Economic Co-operation and Development (2013). *Finland Country Note: Education at a Glance.* Paris: OECD.

Vuorinen, R. (2012). *Career Education in Finland – Recent trends and challenges.* Background paper for the seminar "Sharing Ideas and Best Practice in Career Education with Integrative Approach", 20th May 2010, Gyeongju – Korea.

Vuorinen, R. (2012). *Quality of guidance provision in Finnish education.* For "Consultation on Quality Standards in Lifelong Career Guidance" conference, 19th September 2012, Ljubljana – Slovenia.

Vuorinen, R. and Watts, A.G. (2012). Lifelong Guidance Policy Development: *A European Resource Kit.* European Lifelong Guidance Policy Network.

Watts, A.G. (2011). *The Proposed Model for Career Guidance in England: Some Lessons from International Examples.* London: Department for Education and the Department for Business, Innovation and Skills.

Meetings with experts

Pre-visit consultation: Dr. Raimo Vuorinen, University of Jyväskylä

Our facilitator and guide: Ms. Jaana Kettunen, University of Jyväskylä

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- Ms. Kirsi Myyrä, School Counsellor
- Mr. Reijo Saintola, Physics & Chemistry teacher
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- Ms. Tiina Tähkä, Counsellor of education
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- Ms. Sanna Alanko, School Counsellor
- Mr. Joona Svala, STEM teacher
- Mr. Pasi Ketolainen, Physics teacher
- Mr. Jukka Ottelin, Vice-rector

GERMANY

Key reports and resources

Jenschke, B., Schober,K. and Frübing, J. (2011). *Career Guidance in the Life Course Structures and Services in Germany.* National Guidance Forum in Education, Career and Employment.

Schober, K and Mueller–Kohlenberg, L. (2005). *Study on Indicators and Benchmarks in Career Guidance:* Country Report Germany. CEDEFOP.

Organisation for Economic Co-operation and Development (2012). *Germany Education at a Glance: OECD Indicators 2012.* Paris: OECD.

Organisation for Economic Co-operation and Development (2011). *OECD Reviews of Vocational Education and Training Learning for Jobs Pointers for Policy Development.* Paris: OECD.

Meetings with experts

Our facilitator and guide: Prof. Barbara Schwarze, Osnabrück University of Applied Sciences

Mr. Johannes Brockmeyer, Headmaster, Vocational Schools of Osnabrück Administrative District – Brinkstraße

Mr. Ulrich Pieper, Mr. Schönball, KME Germany

Ms. Elke Turner, Ms. Ulrike Heuer, Osnabrück University of Applied Sciences

Mr. Lothar Wehleit, Headmaster, Ratsgymnasium, Osnabrück

Ms. Magdalena Singh, Job Information Centre, Vocational Guidance in Schools

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Lore Funk, Wenka Wentzel, Scientific Research/Evaluation Girls' Day, Competence Center, Bielefeld

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HONG KONG

Key reports and resources

Chan, J. and Cheung, R. (2012). *Careers Service in Higher Education in Hong Kong.* Presentation to American Psychological Association, Florida.

Chan, W. (2010). A Review of Educational Reform – New Senior Secondary (NSS) Education in Hong Kong. *International Education Studies,* 3(4): 26–35.

Education Bureau Career Guidance Team. (October 2011). *Recommendations on Career Guidance for Secondary Schools under the New Academic Structure.*

Ho, Yuk-Fan (2008). Reflections on School Career Education in Hong Kong: Responses to Norman C. Gysbers, Darryl Takizo Yagi, and Sang Min Lee & Eunjoo Yang. *Asian Journal of Counselling,* 15(2): 183–205.

Poon, Anita. & Wong, Yuo-Chong (2008). Policy Changes and Impact of the Education Reform. *Hong Kong Journal of National Taiwan Normal University,* 53(3): 47–65.

Meetings with experts

Our facilitator and guide: Joseph K N CHAN. Director Student Development Services, City University of Hong Kong

Orientation meeting:

Rony LO, Senior School Development Officer (Careers Guidance) Hong Kong Education Bureau

TSUI Yan Cho, Joe, Vice Chairperson, Hong Kong Association of Careers Masters and Guidance Masters

Raysen W L CHEUNG, Assistant Professor, Department of Applied Social Studies, City University of Hong Kong

Consultation seminar:

Dr. Fong Wing Ho, Tom, Director of Student Affairs, The Hong Kong Institute of Education

Dr. Rosa Tang, Career Development Manager, Hong Kong Baptist University

Tim Wong, Associate Director, Office of Student Affairs, Hong Kong Baptist University

Ted Suen, Head of Information Technology, MTR Corporation Ltd.

Julia Fung, Manager, Industry & University Collaboration, HK Science and Technology Parks

Peter Yau, CEO, Computer and Technology Holdings Ltd.

Ivy Leung, Director Human Resources, Hong Kong Applied Science and Technology Research Institute Company Ltd.

Samuel Hong, Head, Career Planning and Development Centre, Chinese University of Hong Kong

Dr. Janet Chan, School of Biological Sciences, The University of Hong Kong

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Church of Christ in China Mong Man Wai College, 20 Hui Ming Street, Kwun Tong, Kowloon, Hong Kong

IP, Andy S T, Principal

WU Ka Win, Shirley, Career Teacher

TSUI, Joe Career Co-ordinator and Vice Chairperson, Hong Kong Association of Careers Masters and Guidance Masters

KONG Tak Kai, Mike, Vice-Principal

CHUNG Shuk Ting, Jenny, Career Mistress

Three pupils

Kellett Secondary School Shau Kei Wan Campus

Anne McDonald, Principal

Mr. Simon Giddings, Head of Senior School

Ms. Elizabeth Everett, History & Global Citizenship Curriculum Leader

IRELAND

Key reports and resources

Department of Education and Science (2004). *A Brief Description of the Irish Education System.* Dublin: Department of Education and Science.

Department of Education and Science (2009). *Looking at Guidance: Teaching and Learning in Post-Primary Schools.* Dublin: Department of Education and Science.

National Centre for Guidance in Education (2013): *Review of Guidance Counselling provision in second level schools 2012–2013.*

Organisation for Economic Co-operation and Development (2002). *OECD Review of career guidance policies: Ireland Country Note.*

Meetings with experts

Our facilitator and guide: Jennifer McKenzie, Director, National Centre for Guidance in Education – an agency of the Department of Education and Skills, Dublin, http://www.ncge.ie/

Tom Geary, University of Limerick –one of the main centres in Ireland for the training of guidance counsellors

Dr. Anne Looney, Chief Executive, National Council for Curriculum and Assessment – an agency of the Department of Education and Skills, Dublin, www.ncca.ie/

St Mary's Secondary School, Glasnevin, Dublin, a voluntary secondary school for girls

Margaret Lennon, Principal

Frances Devaney, Head of Guidance

Linda Sullivan, Guidance Counsellor

Four pupils from Year 6

THE NETHERLANDS

Key reports and resources

Booy, C., Jansen, N., Joukes, G. & van Schaik, E. (2012). *Trend Analysis: Gender in STEM Higher Education.* Amsterdam: VHTO.

Oomen, A., van den Dungen, M., Pijls, T. & Egelie, J. (2012). *Career Development in the Netherlands: State of Play.* Hertogenbosch: Euroguidance The Netherlands.

Korpershoek, H. (2011). *Search for Science Talent in the Netherlands.*

Organisation for Economic Co-operation and Development (2002). *OECD Review of Career Guidance Policies: Netherlands Country Note.* Paris: OECD.

Volkerink, M., Berkhout, E. & de Graaf, D. (2010). *Careers in Science, Technology, Engineering and mathematics in the Netherlands 2010.* PlatformPocket No.27. Den Haag: Platform Bèta Techniek.

Walma van der Molen, J.H., van Aalderen–Smeets, S.I. & Asma, L.J.F. (2010). *Teaching science and technology at primary school level: theoretical and practical considerations for primary school teachers' professional training.* For "IOSTE Symposium on Science and Technology Education", 13–18th June, Ljubljana – Slovenia.

Meetings with experts

Our facilitator and guide: Ms. Annemarie Oomen, APS National Centre for School Improvemen

Mr. Harrie Eijkelhof, Board/Professor, FIsme of University Utrecht

Mr. Jules Warps, Researcher, ResearchNed, Nijmegen

Ms. Noortje Jansen, Program Manager Higher Education and Research, VHTO, Amsterdam

Ms. Thea van den Boom, Ministry of Education, Culture, Science, Dep. BVE (Senior Secondary Vocational Education), Den Haag

Ms. Karen Oostvogel, Program Manager CEG in Educational Council for Secondary Education, Utrecht

Mr. Rob Abbenhuis, Program Manager Pre-vocational Education/ National Centre for Curriculum Development

Mr. Pieter Reimer, Program Manager Science & Technology (Secondary Education), Platform Bèta Techniek, Den Haag

Mr. Gerard Jacobs, CEO Jet-Net, Den Haag

Munnikenheide College
Carina Reuvers, Principal

ROC West Brabant: Radius College
Mr. Frans Bleumer, Principal

Mr. Peter den Boer, Reader at ROC West-Brabant and independent researcher Onderzoekend Leren (Discovery Learning)

Newman College
Mr. Raymond van Velthoven, Principal

APPENDIX 2:
REPORTS FROM THE INDEPENDENT SCHOOL VISITS

GATSBY

INTRODUCTION

The study examined practice in career guidance provision in the independent school sector in England. This was for two key reasons. The first is that independent schools perform well in terms of attainment and progression indices. Data from the Department for Education demonstrates that independent schools achieve an average point score per pupil that is higher than in any other education sector; moreover a much higher proportion achieve the highest grades.[1] Furthermore, according to the Independent Schools Council (ISC), 91% of pupils leave to progress to higher education.[2] The second reason is that there is very little research on curricular or extra-curricular interventions in independent schools and almost none that examine the role of career guidance. We know that there is a tradition of independent schools sourcing career guidance from an external provider such as Cambridge Occupational Analysts (COA) or Inspiring Futures (part of the Independent Schools Careers Organisation group, previously the Public Schools Appointments Bureau).[3] There are a range of services that they can take up from such organisations, including career guidance programmes, individual career advice with a qualified professional, access to a range of specialised career orientation events, psychometric testing, and a guidance helpline. Schools can also buy in consultancy support or CPD programmes. These are targeted at schools and there is also a service which individuals and their parents can access.

Research by Huddleston *et al* has provided some insight into the position of career guidance in top performing schools in the independent sector.[4] Their research revealed that most schools have several strategies for promoting employer engagement and career guidance, such as through support for work-related learning, enterprise activities, visiting speakers and career information, advice and guidance. These were not embedded into any curricular learning, so there were no career courses or enterprise courses; consequently the researchers classed all employer engagement as co-curricular.

Despite the lack of direct links into the curriculum which are often considered desirable in the state sector, the pupils at these schools enjoyed a varied and extensive programme of employer engagement. These often included speakers drawn from school alumni and from parental networks; work experience which was organised specifically with a view to providing evidence of commitment for the UCAS Personal Statement and which was usually conducted in the Sixth Form in vacation time; and enterprise activities which involved business mentors. Other research has found that this strong focus on evidencing employability skills is likely to be important in supporting pupils from independent schools to navigate a successful transition to higher education.[5]

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[1] Department for Education (2012). *A-Level and Equivalent Results in England, 2011/12 (REVISED) SFR/05/2013*. London: Department for Education.
[2] Independent Schools Council (2012). *Independent School Census*, ISC, London: ISC.
[3] Watts, A.G., Hughes, D. and Wood, M. (2005). *A Market in Career? Evidence and Issue*s. CeGS Occasional Paper. Derby: Centre for Guidance Studies, University of Derby.
[4] Huddleston, P., Mann, A. and Dawkins, J. (2012). *Employer Engagement in English Independent Schools*. London: Education and Employers Taskforce.
[5] Jones, S. (2012). *Work experience and the UK university admissions system: Comparing UCAS statements according to school type*. Presentation to the Education and Employers Taskforce.

SELECTING PARTICIPATING SCHOOLS

The ISC conduct a school census each year of their membership. The census report of data relating to January 2012 reports that:

– ISC schools educate 508,472 pupils;
– 86.5% of pupils are day pupils with 13.5% boarding pupils;
– Girls represent 49% of all pupils;
– 45% of schools are in London and the South East;
– 74.5% of ISC pupils are from a white British background while 25.5% are from a minority ethnic background;
– Between Years 7 and 11, 40% to 43% of ISC schools have either all-boys or all-girls. Sixth Forms are more likely to be co-educational, although it is still the case that almost 40% of Sixth Forms at ISC schools comprise either all-girls or all-boys;
– 91% of the leaving cohort go on to higher education, 1.2% leave to go to further education or training;
– The pupil to teacher ratio is an average of 9.4 to one.[6]

Schools were selected for participation in the research to reflect these broad characteristics of the sector, however, as the review had a limit of five schools, their selection was never going to be representative. Consequently the research team approached the professional bodies associated with the independent school sector to nominate schools. The Headmasters' and Headmistresses' Conference (HMC) and the Girls' Schools Association (GSA) provided some nominations alongside the Brightside Trust, the Good Schools Guide and academic colleagues. This longlist was then reviewed against the following considerations:

– Independent schools tend to be smaller than state schools. The sample should include at least some of the larger schools which will have organisational and capacity issues that resonate with the state sector;
– More independent schools in Key Stages 3 and 4 are single-sex than is the case in the state sector. This might be particularly relevant for girls and their perception of STEM, as we know that girls in single-sex environments are less likely to exclude STEM study from their career thinking than those in co-educational institutions;[7]
– Across the whole independent sector, attainment and progression into HE is higher than in the state sector. However, there are variations in attainment and the selection of schools should include both high-achieving schools and others whose attainment ranks alongside the best of the non-selective state sector;
– Day pupils at independent schools will in principle have a similar range of community influences which inform their career thinking as pupils in a state school;
– Independent schools tend to be strongly clustered in London and the South East; the rest are spread across the country with more being located in more affluent places. The selection should include some in London and the South East;
– The independent sector operates a market in career guidance services. Commissioning of impartial services is a new challenge for schools in the state sector, so it would be useful to hear from schools that have long experience of commissioning a guidance service.

The following schools were invited and agreed to participate.

– Berkhamsted School, Hertfordshire;
– Downe House School, Newbury, Berkshire;
– Dulwich College, London;
– King Edward VI High, Edgbaston, Birmingham;
– Magdalen College School, Oxford.

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[6] Independent Schools Council (2012). *Independent School Census*. London: ISC.
[7] See Department for Education and Skills (2007). *Gender and Education: The Evidence on Pupils in England*. Nottingham: HMSO. Institute of Physics (2012). *It's Different for Girls; The Influence of Schools*. London: Institute of Physics.

In terms of the selection characteristics:

- No school is a small school; indeed some are large including Dulwich with 1,450 pupils and Berkhamsted with 1,100 pupils;
- Two of the schools are all-girls, two are all-boys and one is a co-educational school;
- Three schools are in London or the South East, namely Dulwich, Downe House, and Berkhamsted. Others are in Birmingham (King Edward VI) and Oxford (Magdalen);
- One school (Downe House) is a boarding school, King Edward VI and Magdalen educated day pupils, and the remaining two had a mix.

Case study visits were undertaken in June 2013. Each case study comprised a series of interviews with a member of the senior leadership team (often the principal), the careers lead in the school, teaching staff involved in both the STEM curriculum and the careers curriculum (often the head of Sixth Form or UCAS admissions), and a focus group of between four and eight students who have experienced the career provision at the school.

The following section presents notes verified by each school that describe their career provision for their pupils.

BERKHAMSTED SCHOOL, HERTFORDSHIRE

BACKGROUND

Berkhamsted is a large school founded in 1541. The school is an integration of the former boys' school with the girls' school, the preparatory and junior sections in 1996. In 2011, Berkhamsted School became Berkhamsted Schools Group following a merger with a prep school. It also has a kindergarten in the nearby area so it is possible for pupils to stay with the school from three-months to 18-years-old.

The school offers a 'diamond' configuration with co-education until Year 7, separate boys' and girls' schools to Year 12, and then co-education in the Sixth Form. Extra-curricular activities throughout the secondary school are mainly organised on a whole-school basis (boys and girls).

The school has approximately 1,100 pupils, many of which are day pupils. In the academic year 2012, there were 607 boys and 485 girls. In the Sixth Form each year group has approximately 170 pupils with 20–30 having access to 'academic honours' where they receive additional support to focus on Oxbridge entrance.

LEADERSHIP

The career offer is focused on Sixth Form pupils. The Head of Careers oversees career provision and middle school career staff. She is line managed by the Vice Principal who seeks to ensure that career work is well resourced and held in high esteem within the school. The careers team enjoy close working relationships with the Heads of Houses, who form the basis of a strong pastoral team.

RESOURCES

The Head of Careers is also a teacher of Religious Studies, having approximately one third of her full teaching load allocated to the career role. A combined teaching and career role allows her to become familiarised with relevant groups and understand changes in the curriculum and school structure; both can have an impact on careers work in the school.

The school also has a Head of Middle School Careers who reports to the Head of Careers. She oversees careers in Key Stages 3 and 4.

The school has a full-time Administrative Assistant in the careers department. A main part of her role involves assisting Sixth Form and middle school careers and overseeing projects, event management and administration.

The careers team have a library in a spacious room which is used when external employers are invited to give talks to pupils.

Online resources are supplied by Inspiring Futures. The school pays for full membership for all pupils so that they can access career support throughout their education. These resources include psychometric profiling, personal reports and interviews, access to web resources, an online helpline, and access to other resources and events.

A significant resource is the time given by the Heads of Houses and their pastoral teams. They commented that "careers could not function without the house team". There are nine houses in the Sixth Form with each head allocated one-sixth full-time teaching relief for this role. Each house has approximately 40 pupils (20 in each year group). The Head of House has their team of three pastoral tutors and allocates them roles and responsibilities as suited to their pupils.

They work on a continual basis throughout the Sixth Form so that each pupil will have at least one one-to-one chat a fortnight. These chats may have an agenda or can be more informal, but they are all documented to check pupil progress with their studies and their UCAS application.

CAREERS CURRICULUM

The Head of Careers has developed a curriculum for teachers to follow within Personal, Social, Health and Economic (PSHE) for Key Stages 3 and 4. In Year 8 the Kudos career software programme is used, then in Year 9 the Fast Tomato software programme is delivered. Year 10 pupils take the Morrisby profile in June (a three-and-a-half-hour aptitude and psychometric test), then in Year 11 Morrisby feedback is provided to pupils from an Inspiring Futures Regional Director (professional career adviser). They also have a personal guidance interview between November and January. Pupils indicated to us that the results tend to confirm what they already know about themselves and their job interests (or they manipulated their answers to lead to the outcomes they wanted). One pupil undertook some work experience in an occupational field which was suggested by the test. This occupation had been previously disregarded by the pupil.

The UCAS system is managed as a two-year process through the house system. It begins earlier for pupils that are interested in Oxbridge. In Year 12, there are clear deadlines for initial CV and personal statement completion, 'course finder' questionnaires (Inspiring Futures), and pupil information evenings. After AS-levels, pupils have a two-week programme which involves more research, a parent briefing, and a personal statement and summer work programme. In Year 13 they get interview practice and are linked with past pupils who have followed the courses that pupils are interested in.

Business Skills sessions are developed in conjunction with Ashridge College. All Year 12 pupils attend a seminar then some can elect to take part in a series of sessions to develop skills in communication, presentation and interviews. They are also given the opportunity to take the Myers-Briggs test and receive personal feedback.

There are also Careers Lunches – speakers come in on Friday lunchtimes and give talks to Year 12 and Year 13 pupils on topics such as medicine, engineering, law, accountancy, advertising, theatre, travel grants and industry. Career Taster days are also offered, one for careers in law and another for medicine. These events combine talks and seminars with practical tasks and workshops. Careers Fairs are held every year and are open to all pupils and pupils from other schools in the locality. There is one for Year 10/11 and one for Year 11/12, with the latter including representatives from universities, gap year providers and employers. The careers team also offer drop-in sessions and CV clinics.

STEM ACTIVITIES

Most of the work on STEM engagement occurs within subject lessons, however teachers also organise visits to scientific working environments. It is expected that each subject teacher demonstrates a passion for their subject and encourages pupils who are interested in their area – perhaps through running extra-curricular clubs. An example of this is the 'Karting Club' and a 'Robot Wars' type competition (supported by the technology company Selex Galileo, who distributed components to seven schools in the area to facilitate the competition). The design and technology department also run an aeroplane building club, with the mathematics department having a 'Maths Quiz' club and 'Maths Challenge'.

Many of the teachers at the school have had other jobs prior to teaching which encourages the maintenance of links with industry. New links are made through alumni and local businesses. One teacher commented that "it is always good to get teachers who are not straight out of the box".

Each subject has a teacher who is a 'Specialist Adviser' who can advise pupils on courses in their subject area. They are expected to know about the university courses on offer and entrance requirements, with some having current vocational knowledge. This role has (modest) value on the school salary scale.

Many of the pupils who talked to the research team were interested in STEM. Their work experience included companies such as Selex Galileo, Heli-Air, Airbus, Aston Martin and Jacobs Engineering Group. The school had helped one pupil from Hong Kong to organise her work experience in Hong Kong when it was clear that she would not be able to do it in the UK. One pupil had organised three work experience placements.

IMPACT

Pupils said the things that had most impact on them were:

– Careers Fairs (opened up a whole range of options in engineering);
– Tutor support (specific help for applying for the Forces; good to talk to an adult other than a parent for guidance on career choices);
– Subject teacher (to get us to look at courses).

The careers team initiated their own review of provision by commissioning an audit from Inspiring Futures. This followed parent survey feedback that showed that in terms of satisfaction and awareness of the range of school activities, parents had least awareness of what the careers team offered. The school then paid for a consultant from Inspiring Futures to come in, review their offer and advise on improvements.

A key metric for school success is the proportion of pupils progressing into university, in particular to Russell Group universities.

SUMMARY

The pastoral system provides the framework for career guidance in the Sixth Form and this is highly rated by staff and pupils.

Subject teachers see their pastoral role as important. The role includes pupil progression and staff support in actively encouraging pupils to enjoy their subject, sharing their own employment related experiences with pupils, and exploring higher education courses.

Career expertise is valued as part of the system. The careers team have a dedicated budget and sufficient time resource. Their activities are known across the school. They enjoy high regard from their teaching colleagues. Also, the pupils know what they do and will voluntarily approach the careers team for help.

Inspiring Futures are used to resource the personal guidance sessions with pupils and to support the Careers Fairs. They have also been used to provide expert input to review the schools careers provision. Pupils liked talking to the "careers lady" about what they had said they were interested in. They also remembered and reflected on the outcomes of the psychometric profile, and valued this even when some of them did not agree with the types of job role it suggested they explore.

DOWNE HOUSE SCHOOL, BERKSHIRE

BACKGROUND

Downe House School is an all-girls boarding school with around 560 pupils. They have their primary intake in Year 7 (age 11) although a few girls do join a couple of years later. Most pupils go home only during the holidays. The pupils are mostly UK nationals although some international pupils have started more recently.

LEADERSHIP

The Principal believes that career guidance is important to the school and provides resources accordingly. For the school's pupils its functions include encouraging aspiration and motivation, increasing awareness of the outside world, and developing good decision-making skills. Thus careers is seen as a whole-school issue "to raise aspiration, awareness and appreciation of others". Career awareness is seen as an important part of motivating pupils, for example through university talks in Year 10. During the Fifth Form (Years 10 and 11) girls are encouraged to engage in the real world through work shadowing in the school holidays. This is positive as it encourages them to discover what the world expects of them, and gives them an adult view that is different to what they hear from teachers and parents.

The other aspect of careers is its link to the school as being part of a "community for life". The idea of school as a community is important to the ethos of Downe House. The school likes to maintain links with its alumni and their pupils' parents: these are valuable for career guidance and, as in all the independent schools we visited, they are also important for fundraising. Career activities provide a focus for these networks.

STAFF

Downe House School has a careers team which consists of:

- A Director of Careers Education and Guidance who is also an economics teacher with 22 periods out of 30 dedicated to careers;
- A Head of Careers for Years 7–11 who is a geography teacher and has 19 periods out of 30 dedicated to careers;
- An Oxbridge Co-ordinator who is a chemistry teacher;
- A World of Work Co-ordinator who organises work shadowing, internships and gap years;
- An Overseas University Co-ordinator who is also a history teacher;
- A Careers Administrator and Librarian.

Others who support the careers team are the Sixth Form tutors, who advise on university admissions and UCAS forms, and house staff. The careers team offer their teacher colleagues regular training and briefing updates on course requirements, reference writing and the UCAS process.

Sixth Form pupils can choose who they want as their personal tutor from a shortlist. Both pupils and teachers perceive this to be positive as it builds on mutual interests. Each pupil in the Sixth Form will have a ten minute one-to-one conversation with their personal tutor each week. There is an open agenda but it provides an opportunity to discuss a range of issues including career exploration and decision-making. Each tutor is allocated four pupils from the lower-Sixth and four from the upper-Sixth.

RESOURCES

There is a careers library which is centrally located. It is open every day as it is also the office of two of the careers team, including the Administrator.

CAREERS CURRICULUM

There is a planned programme of career guidance at Downe House that extends from Year 7. There is some light-touch career work in Years 7 through to 9 within PSHE (including use of 'The Real Game'), and information for parents to inform GCSE choices and subjects. They also explore 'Fast Tomato' in ICT in Year 9. In Fifth Form (Year 11) they take the Cambridge Profile Aptitude Tests (facilitated through COA – Cambridge Occupational Analysts) and receive feedback. They also have at least one personal guidance session with the careers team.

In the Sixth Form (and open to Year 11) there are a series of OYSTER talks to encourage individuals to visit the school to talk about their jobs and the routes they have taken in their careers. A number of individuals have given talks including a barrister, neurosurgeon, publisher, creative writer and interior designer. These talks are usually in the early evening.

The upper-Sixth Form also undertake an Independent Research Report, which is an extended 5,000 word essay that is tutored and allows them to develop their knowledge in a topic of their choice as well as the research skills necessary for university. The link to careers is that it encourages them to develop an interest and be able to talk about that interest in university admission procedures.

EXTRA-CURRICULAR ACTIVITIES

In Year 7 they are expected to participate in "take your daughter to work" day and then feedback on their experience to their peers. After taking GCSEs the pupils are expected to undertake a week of work shadowing in the school holidays. They are expected to arrange this themselves with either parental support or help from the network of alumni. The paperwork for this has been developed by lawyers and it is the responsibility of the pupil to ensure that this is all in place with evaluations completed. The pupils are encouraged to do two weeks in total. In most cases this includes elements of work experience rather than just shadowing.

Other activities that are promoted to the girls include taster courses for university, 'debate chambers' and the workshop events run by Inspiring Futures.

As Downe House is a boarding school, there are many opportunities to put on extra activities, for example personal statement preparation sessions and practice interviews for Sixth Formers which can be held after supper. There are many opportunities for personal guidance consultations, and pupils are expected to have at least one in Year 11 and at least two in Years 12 and 13 with the careers team.

STEM ACTIVITIES

There is no branded programme for STEM careers and while this would be something the careers team would like to develop further, it is not a proposal that has been taken up yet. However, there is a good range of STEM activities that the girls can take part in, including Astronomy Club, Science Club, CREST Awards, Challenge Day for STEM subjects, Engineering Education Scheme, Headstart and links with the Rutherford Appleton Laboratory, plus activities that are needed for access to careers in medicine (the Specialist Medicine Scheme). The aim of all of these is to challenge the pupils to encourage them to discover what they are good at, and what they enjoy.

Pupils are encouraged to develop their own interests – for example, pupils set up their own Medical Society which invites speakers and provides group support for the 10 or 12 girls each year who want to become medics.

IMPACT

There is no formal evaluation of the impact of careers work although the careers team do take time to self-reflect when they are developing the programme each year to identify what worked well, the gaps that exist and what needs to be addressed. There has been little feedback from parents but that is interpreted as a sign of either approval or at least acquiescence.

The pupils that we spoke to said that they valued a number of aspects of their learning including:

- Activities such as Headstart or the Engineering Education Scheme programmes as they can either affirm or negate career thinking;
- Talks by visitors to the school, for example one pupil with an interest in international development felt inspired by an engineer from Thames Water whose talk opened her eyes to the role of engineering in improving people's lives;
- Work shadowing, again because it helps to shape career goals (e.g. engineering firm) or allows pupils to rethink their career goals (e.g. after shadowing in hospital or food retail);
- COA assessments, which were said to be useful for the way it made the girls think about what aspects of work they liked (working outside or with people for example). They also said that the Careers Directory (a book) is a really helpful resource when the internet can seem so overwhelming to them;
- The pupils said they like to be asked what makes them happy rather than just what subjects they like.

SUMMARY

The Principal of Downe House School clearly values the careers programme and has invested in the careers team. The careers team are all teachers who have a reasonable allocation of time to discharge their careers-related responsibilities. The wider teaching community also share a number of pastoral and development responsibilities.

Career guidance arises from a combination of experiences and opportunities working alongside targeted and focused career support. For example, there are programmes of support specifically for those pupils who want to enter Oxbridge, and for those who want to become medics, to help them to understand the processes and build appropriate experience and portfolios.

There is an emphasis on encouraging the active engagement of alumni and parents with the girls at the school partaking in work shadowing opportunities or inviting speakers.

DULWICH COLLEGE, LONDON

BACKGROUND

Dulwich College (founded 1619), is a large boys' school with 220 boys in each year group. Dulwich sponsors (though not financially) the Isle of Sheppey Academy and is the educational partner of the new City Heights Academy in Lambeth. It also has five partner schools overseas. The College has a long tradition of offering scholarships and bursaries. From the 1940s until the 1960s it benefited greatly from the 'Dulwich Experiment': Local Education Authorities sent scholars from families who could otherwise not afford the fees. For some years thereafter certain pupils benefited from the government's 'Assisted Places' scheme until that too was withdrawn. Currently around one-third of the boys who attend Dulwich College are on fee-assisted places – well above the independent school norm.

The income generated through partner schools and other commercial enterprises is partly used to offset the cost of this scheme.

Eddie George (former Governor of the Bank of England) was a former pupil of Dulwich – he has said that "Dulwich was the gateway to the rest of my career". He was Chair of Governors when the Lord George Building was funded and constructed incorporating classrooms for economics at A-level (around 100 boys each year now take the subject), and for career provision.

The staff also talked about the benefits of being in London, such as being close to centres of professional employment, major research universities and a multitude of opportunities for engaging with the wider world.

LEADERSHIP

The Head of Careers is line managed by the Deputy Master (Academic) and also reports regularly to the Master. The Master is also on the Board of the Inspiring Futures Foundation (IFF). The IFF is a social enterprise with the key mission of extending good career advice to the state sector. It grew from the Independent Schools Careers Organisation, which had a near monopoly on careers advice in the major independent schools for some decades. IFF retains a large share of the market in British and, increasingly, international independent schools. There is clearly an understanding of the importance of good careers support at the most senior levels of the school.

The Head of Careers has played a critical role in leading and developing the careers input at Dulwich College and has been at the college for 24 years. Coming from a marketing background, she helped to build up a network (and database) of contacts which comprises external contacts established through requests for careers support, alumni and parents of current and former pupils. The support of new alumni is valued – undergraduates can advise current college pupils about their courses/universities; graduate trainees can talk about their experiences of securing contacts; and young professionals can advise of developments in their fields. The external contacts are considered key to the quality of the service; the opportunities afforded to the pupils and the college's academic departments; and in ensuring information and advice are up-to-date. By nurturing such links, much good PR for the college is generated and excellent relationships with alumni are built that prove fruitful for the college long term as alumni wish to 'give back'. This dual role of supporting pupils and engaging with business networks lies at the heart of Dulwich's approach to careers and helps explain the profile that career work has developed at the college.

STAFFING

The careers team comprise three staff members whose job roles amount to two full-time equivalent employees. The Head of Careers is supported by a Careers Adviser and a Careers Administrator.

CPD for careers staff is encouraged. The Head of Careers attained the postgraduate Certificate of Professional Practice 'Leading and Managing Careers' (University of Cambridge's Faculty of Education) and continues with CPD to maintain membership of the Career Development Institute. She also attends a range of events such as the recent launch of the National Careers Council Report.

The newly appointed Director of University Admissions will for the first time be co-located with the careers team.

The careers department benefits from a team of Careers Prefects, who are given roles and tasks that suit their skills and aptitudes: this might include updating the website, photography, phoning external careers contacts to support events, or other administrative duties.

RESOURCES

The careers centre comprises: a teaching space with interactive white boards and tables for small group working, a bank of computer terminals, and other resources including notice boards and a careers library with printed prospectuses. Finally there are three offices that can be used for career interviews. These resources are supplemented by input commissioned from external career specialists. Both COA and Inspiring Futures are used. Dulwich represents both significant potential business for these providers and the Head of Careers regularly reviews the service they provide and the pricing. In the academic year 2012/13 Year 11 have proceeded with COA's Preview and Profile programmes but additionally about 20 pupils were working with Inspiring Futures with the intention to evaluate and compare the services of both for their appropriateness to the needs of pupils. The Head of Careers is responsible for this process.

CAREERS CURRICULUM

Career guidance effectively starts in Year 11, with all pupils taking the COA assessment, and having a follow-up interview with COA careers advisers. The personal profile created by this process is then held on the pupil's individual record held by the careers team. Each pupil is then offered personal guidance sessions from the Dulwich careers team: some pupils will just have one further session; many have several more. But each Year 11 pupil will have been seen by the Dulwich advisers at least once.

All pupils are required to undertake a 'work contact' at some point prior to their UCAS application. Such a work contact could be, at the minimum, attending a lecture and speaking to the lecturer afterwards or, more substantively, undertaking work shadowing or work experience. This approach is deliberately flexible to encourage pupils to identify activities that suit their own needs. The boys we spoke to had all undertaken work contacts that went beyond the required minimum. One boy had done work experience at PricewaterhouseCoopers (rejected as a career option because he found it too boring) and in a research lab (ditto). He was going to undertake further work experience with HS2 and apply to university to undertake a general engineering degree.

While most of the experiences were organised by the boys themselves, the careers team had prepared them with sessions on practical issues like writing letters and CVs, how to make phone calls to businesses, expectations of pupils and so on.

The Work Contact Scheme is part of the Dulwich Diploma. The Diploma is designed as an alternative to the International Baccalaureate. It has a number of different components which include elements of career guidance:

– Four AS-levels or three A-levels;
– Liberal studies programme – a series of lectures on health and well-being as well as programmes on history and art;
– ICT qualification;
– College 'colours' which boys achieve through some sort of 'service' (e.g. careers prefects);
– Critical thinking AS-level;
– Extended Independent Research Essay (undertaken in the four weeks after they complete their AS exams);
– Work contact and other work with the careers team.

The Diploma enjoys a high level of uptake and achievement. In fact in 2012/13 only 17 boys out of 430 did not receive the Diploma.

A further innovative aspect of careers work is the networking events that the school hosts. The careers team invite a number of business people from a particular sector to an event (often hosted at the Dulwich Picture Gallery). They provide the room, some refreshments and a brief welcome speech and then it is up to the boys to network, and to find contacts, chat with them, learn about what people do and collect as many business cards as they can. Boys are prepared in advance, through careers lessons, on the conventions associated with networking, including introductions, handshakes and business cards. Boys registering for attendance are required to read the provided professional biographies of the guests. These networking events have led to work experience opportunities for the boys and provide a valuable opportunity for the school to keep in touch with its alumni and friends. There are some safeguarding issues but these are addressed through practical steps such as ensuring that all communication between boys and employers is only through the school email address with a member of careers staff copied in.

Careers Fairs are held for Years 11, 12 and 13 for pupils and their parents. They are large events with universities, employers and gap year providers.

The boys we spoke to were a diverse group. They suggested that a range of experiences had helped them to think about their careers: three boys suggested work experience had helped them to either affirm or reject their views; another suggested that it was important to find out what your hobbies are; three said it was important to use friends and contacts; and another suggested that getting involved with the many societies at school could open up ideas.

The careers team have a comprehensive database of all pupils which they use to compile notes of every conversation they have with a pupil. These notes are open to the pastoral tutor teams.

STEM ACTIVITIES

Out of a school year of about 210 pupils, approximately 155 take maths, 40 take further maths, 90 take physics, 70 take chemistry, 60 take biology, 10 take design and technology, 15 take computing, and about 100 take economics. Maths and physics in particular have seen a steady increase in numbers over the past three to four years.

The teaching teams are very enthusiastic about their subjects and this is clear to the boys. They encourage boys from GCSE to attend societies and events such as public lectures within the school or outside it. The teaching team enjoy working with the boys who were characterised as being academically naive in some senses – "they still enjoy learning without any sense of crippling self-knowledge, so can simply enjoy spending time solving a complex puzzle".

The school engages in the types of enhancement and enrichment activities one would expect, such as external and internal competitions, team projects, holding their own exhibitions and events, organising trips and attending lectures in London. They also have a range of other activities such as an autumn trip and a summer school to CERN, the latter organised with three other schools. The challenge is to spread these opportunities across the entire cohort as some of the 'high flyers' would gladly take up every opportunity, but these opportunities will benefit any boy at the college.

IMPACT

The Head of Careers said that assessing the impact of UCAS-focused activity was straightforward, but less so for careers. Certain activities can be monitored such as the number of events held, number of boys attending events or the uptake of meaningful work engagements; however, the real impact of career work is whether or not boys are able to align their interests and aptitudes with learning opportunities and an awareness of the career opportunities available to them.

The Head of Careers suggests that the boys value the careers input because it is motivational for them – they can visualise what their futures might be and all the hard work of learning has meaning to them. She also suggested that parents value it for its motivational effect, but also because it gives them confidence in the decisions the boys make. Parents are increasingly concerned about the cost of going to university and the wider economic situation with graduate underemployment being a concern that many families raise.

KING EDWARD VI HIGH SCHOOL FOR GIRLS, BIRMINGHAM

BACKGROUND

King Edward VI High School for Girls is part of the King Edward VI Foundation which runs the independent school for boys which is located next door, as well as a number of other selective state-maintained schools across the Birmingham area. The school's main intake is in Year 7 (called the Third Form). It has lower- and upper-Fifth Forms, and lower- and upper-Sixth Forms. There are roughly 80 pupils in each cohort.

Pupils are taught physics, chemistry and biology from the start. There are eight compulsory subjects at GCSE including maths, English, a modern foreign language and Latin. Most pupils continue maths into A-level (about two-thirds of the cohort), with between 45 and 55 taking chemistry, the same numbers taking biology, and between 16 and 24 taking physics. A-level class sizes are 16 girls per class. It is expected that pupils will take four A-levels and, in exceptional cases, five.

LEADERSHIP

The Principal has set out her "Strategic Intent" in a document covering 2011–2016. The theme of this is 'Inspiring excellence in the intellectual life of the future', and there are two key focus points:

– Encourage more intellectual confidence, risk taking and individual curiosity in girls;
– Develop a science strategy that will inspire girls to pursue careers in science that are not restricted to the medical area.

The theme of "not just medics" was restated by the Principal, reinforced by staff and reflected in conversations with pupils. The Principal also stated her reluctance to encourage the girls to start thinking about career too early, and that the priority should be to promote intellectual curiosity and take subject study as far as possible. She rejected the idea of career decision-making as a rational and linear process, and wanted the girls to see that their careers can take many different turns throughout their lives. She thought that it was more important to offer a wide range of opportunities to girls to build their core values and to open up new vistas for them. Career choices should be based on values, not technical decisions associated with money-earning potential. To achieve this she has established a series of ten-minute career talks in the morning given by Old Edwardians who talk about their career journeys and the decisions and changes they had made in their careers alongside their family responsibilities. One of the pupils reflected back that after going to these talks she had learned that if something does not work out "it's not the end of the world".

STAFF

The Head of Careers is newly appointed to her post. Her role is part-time alongside her teaching responsibilities for religious studies. She has careers class-time allocation of three periods per week.

A Careers Adviser is also employed by the school. She is paid an allowance in addition to her own position as a history teacher.

The Head of Sixth Form has responsibility for the 'Personal Decision Making' module in Sixth Form and for all UCAS applications.

Other staff members have further roles: for example, there is a Head of Enrichment focusing on subject-specific enrichment, and one of the maths teachers has a role which involves one-to-one sessions with girls to encourage them to broaden their interest in subject areas. These discussions aim to inspire the girls to find ways to extend their interest through extra-curricular activities or self-directed learning through wider reading. The girls we spoke to mentioned influential books that they had read after these sessions.

None of the staff have any formal careers training, and there is a limited budget for attending training or other professional updating activities. External careers professional input is not sought.

RESOURCES

The careers team have a spacious careers library with university prospectuses and other resources alongside computer terminals. They also have a more private interview room. There is a careers notice board in the corridor and new TV screens will be used to market upcoming events. Pupils are welcome to use the careers library at any time, although as it is housed in the Sixth Form corridor it used by fewer young pupils. There is also a project to build a database of Old Edwardians and parents who can be called upon to provide talks, or work experience or shadowing opportunities. At the moment too much of this information is held in staff members' heads.

EXTRA-CURRICULAR ACTIVITIES

Girls are encouraged to attend the ten-minute Old Edwardians' talks. Their learning about careers might be incidental to a number of enhancement and enrichment activities which include attending lectures at the University of Birmingham and participating in STEM competitions. These are the types of activity which the girls identified as being the most influential in helping them to think about their futures (namely reading around the subject, attending lectures, developing a passion for a subject, and browsing the internet). A careers forum/fair is held every year, and some years this has a science focus. This was not strongly valued by the pupils we spoke to. The new performing arts building provides facilities that allow them to participate in performing arts (and thus develop self-awareness and self-confidence), alongside opportunities to perform technical roles, such as sound, lighting and video, to a professional standard.

STEM ACTIVITIES

The school has a very strong science and maths focus. There is much emphasis on encouraging active and deep learning in the science and maths subjects – so that the love of the subject will shape the girls' decision-making. Girls participate in a wide range of enhancement and enrichment activities including an Astronomy Club which is open to all girls as an optional GCSE studied at their own pace in lunchtimes; Salters Chemistry Camps; a Comenius project for physics; Engineering Club; Extreme Physics (competitions); Smallpiece Trust activity; plus additional activities to encourage girls to think about what a medical career involves (e.g. Saturday club to practise surgery and sutures, and encouragement of work shadowing). One of these activities, 'Practical Action', is a competition which all Year 8s have to do – they might initially be reluctant but they do get a lot out of it.

There is good awareness of the career guidance opportunities (talks, careers fairs, resources) that exist within the school among the science team.

IMPACT

In terms of measures of success, the Principal cited the number of pupils who go on to take pure science degrees as a positive measure of success. Meanwhile, staff reported that the measure of the proportion of pupils who go on to Oxbridge remains an important accountability measure for the Foundation.

SUMMARY

The Principal is proud of the long tradition (stretching back to the 1920s) of the school's alumni moving into further study of science and science careers. She is committed to encouraging the girls to go into science careers. She considers the best way to achieve this is for the pupils to build a love of the subject, and warns against asking them to think about careers from a young age.

The careers team in the school wholly support the aims of the Principal and her focus on developing an awareness of the range of women's careers and career paths. Their ambition is to complement this with more formal career guidance opportunities, and, in particular, more opportunities for them to develop their own knowledge and capacity to advise pupils on a range of options including higher education courses that go beyond medical studies, and the emerging routes into professions.

The pupils appreciate the range of activities that they are encouraged to undertake in addition to their studies. They all have ideas of the types of things they are interested in and appreciate the experiences they have had. They would value the opportunity to have their thinking about their futures "challenged".

MAGDALEN COLLEGE SCHOOL, OXFORD

BACKGROUND

Magdalen College School (MCS) is a highly academic day school for boys, with a mixed Sixth Form. It has an associated Junior School for primary age boys. Virtually all of its 800 pupils (aged 7 – 18 years) are university-bound, with Oxbridge dominant: in 2012, nearly 50% of pupils received Oxbridge offers.

LEADERSHIP

The Master is a very proactive leader who will be the next Chairman of the Headmasters' and Headmistresses' Conference (a leading independent school body). He is closely involved in the careers programme and interviews of every Year 11 pupil and thus their future plans. He believes that the most important thing is to develop a love of a subject, and everything else follows from that.

STAFF

The school has a Head of Careers who has three to four periods of relief from teaching to dedicate to the role. There is also input from the pastoral and UCAS teams, including the Head of Upper School, and the Head of Upper Sixth and UCAS.

CAREERS CURRICULUM

The careers programme is launched in Year 10 and into Year 11. During this year a number activities are run including:

- Enterprise Day – to gain insight into and develop the skills to run a business. The day involves a team-based competitive session entitled 'Sell for Success' run by Young Enterprise, and a session on enterprise and personal finance led by MCS staff. In 2013, this day will launch a range of extra-curricular enterprise activities open to middle school pupils.
- CV writing – encourages the boys to think about how they present themselves, the skills they are developing through all aspects of school life, and how to build up their own CV. This is led by tutors, with input from a parent who is a management consultant.
- Work experience planning – boys are encouraged to organise their own work experience. They receive help in letter writing and how to approach the process, as well as a training session on presenting themselves in a professional context. The boys are assisted with following up relevant contacts.
- Individual interview with the Master after mock GCSEs – he asks the boys "where do you want to be when you are 25?" and not "what are you going to study at university?";
- Morrisby aptitude tests – taken by almost all pupils at the end of Year 10 with follow-up interviews at the start of Year 11. This is seen as a way to follow up with each pupil about their career thinking and particularly about their A-level choices to ensure they are broadly complementary. It also feeds into the guidance offered to pupils about making A-level choices during Year 11. Parents are charged separately for this.

Pupils are encouraged to arrange their own work experience in Year 11 following GCSEs, proactively approaching possible placements as well as using contacts from friends, family and, where appropriate, contacts suggested by the school. The majority of pupils do some kind of work experience. In addition, a substantial proportion of pupils undertake a further work experience placement at the end of their lower-Sixth year, and the Sixth Form lecture programme contains talks focusing on the world beyond school including career and personal finance.

A Careers Fair is run every year and all pupils from Year 10 upwards are encouraged to attend. The expectation that the boys attend in successive years is helpful – it was mentioned by the boys we spoke to that their second visits were more focused. This is held jointly with Headington School – an independent school for girls in Oxford.

The Head of Careers also speaks at year assemblies; arranges a series of career workshops in the first two terms of each year; and is available for drop-in consultation.

Some pupils also participate in an enterprise competition run by the Oxford University Careers Service, which links school pupils to real-life business problems and a university pupil mentor. This scheme is still in its infancy. In addition, the school's Duke of Edinburgh and Community Service programmes offer pupils experience of work placements.

Pupils are regularly surveyed about their career plans to ensure that the school is providing appropriate support. For instance, in response to growing numbers of pupils wishing to apply for courses in computing, the school is extending its extra-curricula provision for interested pupils, supported by a Waynflete Intern. These are recent graduates or post-doctoral pupils, usually employed on a part-time basis to offer enrichment and extension in their subject area. The school now has Waynflete Interns in a number of subjects, who contribute to academic provision, career activities as appropriate, and also the Waynflete Studies programme (see below).

Activities in the Sixth Form are more focused on choice of degree course and university entry, in which pupils are extensively supported throughout their Sixth Form years. Every pupil is expected to go to two university open days in the summer term of Year 12 and two in the autumn term of Year 13.

The school organises a special "Medical Admissions Day", which complements the biology department's preparation programme for aspiring medics. The careers team are planning to extend this in 2013 with a conference for pupils applying for other vocational degree courses, including computing, engineering, psychology, law and architecture.

During Year 11 and 12, every pupil carries out an extended project called the Waynflete Study. It is similar to an Extended Project Qualification, but validated by the school itself. Pupils have an external tutor from the University of Oxford as well as an internal project supervisor, and the studies are marked internally by MCS teachers. Following this, the best projects are judged by a panel of external academics, and prizes are awarded. This project exercise gives pupils opportunities to make links with academics whose subjects they may wish to pursue in future.

The real driver in determining future pathways is university choice, which appears to run independently of formal careers work. Support for UCAS applications is systematic and extensive.

STEM ACTIVITIES

Like most independent schools, MCS offers a host of optional extra-curricular activities that help pupils learn about careers, especially in STEM. These include:

- Careers workshops in the evenings, once a week in the autumn term, with attendance being optional. Examples include 'Engineering' (with Oxford undergraduates) and 'Mathematics and Investment Banking';
- Visiting speakers related to particular subject areas. The school has a huge advantage in being able to draw on its impressive parent and alumni body, and in terms of the proximity to the University of Oxford;
- Headstart courses at universities;
- A CV writing workshop.

In addition, most subjects have a society to encourage broader interest – for example there is the 'Maths Olympiad', 'Nitro Club', 'Technology Club', STEP classes, and the 'Maths Cipher Challenge'.

RESOURCES

There is a careers library and a careers section on the school intranet, which includes accounts of pupils' experiences at university interview.

IMPACT

The UCAS operation is smooth-running and its impact can be seen in the impressive figures for entry to elite universities.

SUMMARY

The school's career guidance is almost entirely self-contained, drawing on its excellent network of parents and alumni, and the proximity of the University of Oxford. The emphasis is strongly on developing a love of a subject and using that as a driver for university entry and beyond. The Waynflete Study is a superb opportunity for pupils to get deeply into a subject, supported by tutors from the University of Oxford.

SCHOOL CONTACTS

School address	Participants
Berkhamsted School, Castle Campus, Berkhamsted, Hertfordshire HP4 2BB	Vice Principal, Academic. Head of Careers Careers Administrator Head of Sixth Form Head of Ashby Sixth Form House and Maths teacher Science teacher Head of Science Head of Design and Technology Parent of Year 13 boy Five Year 12 pupils
Downe House School Cold Ash, Thatcham, Berkshire RG18 9JJ	Principal Director of Careers & HE Guidance and Economics teacher Head of Sixth Form and Politics teacher Oxbridge Coordinator and Chemistry teacher
Dulwich College, Dulwich Common, London SE21 7LD	Head of Careers Head of Physics Deputy Master Four Year 12 boys Two Year 13 boys
King Edward VI High School for Girls Edgbaston Park Road, Birmingham B15 2UB	Principal Head of Careers Head of Science Careers Adviser and History teacher Head of Sixth Form Three Year 10 girls Two Year 12 girls
Magdalen College, Oxford OX1 4AU	Master Head of Science Head of Upper School (Years 7–11) Deputy Head of Sixth Form (Upper-Sixth and UCAS) Four Year 12 boys

APPENDIX 3:
KEY LITERATURE RESOURCES

GATSBY

WHAT DOES THE LITERATURE TELL US ABOUT WHAT "GOOD" LOOKS LIKE IN CAREER GUIDANCE IN STATE SCHOOLS IN ENGLAND?

INTRODUCTION

The literature used here is a selected sample of some of the more authoritative reports and resources that offer some insight into what 'good' career guidance looks like in English state schools. The methodology for the review was a desk-based rapid review of the more empirically based studies. This was supplemented with evidence from practitioner-based guides describing successful practice in schools and reports that looked particularly at STEM-related career guidance practice. Material was selected from 2004 onwards, based on the last systematic review of career guidance in schools conducted by the Centre for Guidance Studies (CeGS– subsequently renamed the International Centre for Guidance Studies).[1] The review was based on our own knowledge of the field, supplemented by database searches of British Educational Index, Expanded Academic, Google and Google Scholar. The selection is not a systematic review but was undertaken to inform the research process rather than present a compendium of all published works on this subject area. Once the reports were identified they were summarised and the key features of good practice were presented. The resources presented here are clustered into broadly thematic areas that reflect career guidance, quality in careers, STEM careers, encounters with employers and the workplace.

There is a very limited, empirically derived, evidence base of what good career guidance in schools looks like – some research studies were undertaken using larger samples of young people and schools in the early 2000s and these are summarised in the already mentioned CeGS review of the evidence base.[2] The Bowes review found evidence suggesting that good quality Career Education and Guidance (CEG) interventions can have a positive effect on young people and contribute towards the success of subsequent transitions made at Key Stages 3 and 4. However, the strength of this impact is mediated by a number of factors, such as young people's motivation and capabilities, family relationships and parental involvement in decision-making, gender, socio-economic constraints, environmental factors, peer-group and the formal education system in general. There is a rather richer evidence base drawn from international evidence which is summarised in Hooley *et al*.[3] This was adapted for the Careers 2020 report[4] which includes the taxonomy that describes good careers work in schools and which provided the basis for the subsequent report published by Coiffat.[5] This report described changes in provision in a sample of schools, resulting from the government's changes to the funding and responsibility for career guidance in schools.

There are other resources which are authoritative in that they have been developed by experts involved in delivering, auditing or supporting career guidance. These include the quality standards (one developed for the previous government, and the other developed by the profession for itself). Additionally 'how to' guides, such as Donoghue, highlight the importance of using a variety of different learning approaches in career learning and discussions.[6] Some studies are derived from research with practitioners and 'experts' in the field, such as McCrone *et al*[7] and Andrews, which identify three possible models that could improve the delivery of career guidance in schools.[8] We also reviewed some studies that looked

[1] Bowes, L., Smith, D. & Morgan, S (2005). *Reviewing the Evidence Base for Careers Work in Schools: A Systematic Review of Research Literature into the Impact of Career Education and Guidance During Key Stage 3 and Key Stage 4 on Young People's Transitions*. Derby: University of Derby. Centre for Guidance Studies (CeGS).

[2] Bowes, L., Smith, D. & Morgan, S (2005). *Reviewing the Evidence Base for Careers Work in Schools: A Systematic Review of Research Literature into the Impact of Career Education and Guidance During Key Stage 3 and Key Stage 4 on Young People's Transitions*. Derby: University of Derby. Centre for Guidance Studies (CeGS).

[3] Hooley, T., Marriott, J. and Sampson, J.P. (2011). *Fostering College and Career Readiness: How Career Development Activities in Schools Impact on Graduation Rates and Students' Life Success*. Derby: International Centre for Guidance Studies, University of Derby.

[4] Hooley, T., Marriott, J., Watts, A.G. & Coiffait, L. (2012). *Careers 2020: Options for Future Careers Work in English Schools*. London: Pearson.

[5] Coiffait, L. (2013). *A Cloudy Horizon: Careers Services in England Careers 2020 Phase Two*. London: Pearson.

[6] Donoghue, J. (ed) (2008). *Better Practice: A Guide to Delivering Effective Career Learning 11–19*. Godalming: Advisers and Inspectors for Careers Education.

[7] McCrone, T., Gardiner, C., Southcott, C. and I, Featherstone, G. (2010). Information, Advice and Guidance for Young People. Slough: NFER.

[8] Andrews, D. (2013). *The Future of Careers Work in Schools in England*.

at employer engagement in schools, such as Mann and Virk, which indicate that closer engagement between schools and employers can lead to better pupil outcomes in attainment and the labour market.[9] In addition we gained insights into STEM careers in schools by reviewing the ASPIRES programme, which found that in order to encourage more young people into STEM, careers need to be embedded into the science curriculum and start at an earlier age.

Defining terms

It is useful to define some of the key terms used in the literature review. The OECD defines career guidance as referring to:

"Services and activities intended to assist individuals, of any age and at any point throughout their lives, to make educational, training and occupational choices and to manage their careers. Such services may be found in schools, universities and colleges, in training institutions, in public employment services, in the workplace, in the voluntary or community sector and in the private sector. The activities may take place on an individual or group basis, and may be face-to-face or at a distance (including help lines and web-based services). They include career information provision (in print, ICT-based and other forms), assessment and self-assessment tools, counselling interviews, career education programmes (to help individuals develop their self awareness, opportunity awareness, and career management skills), taster programmes (to sample options before choosing them), work search programmes, and transition services."[10]

Watts identifies career guidance as having three main elements:

- Career information, covering information on courses, occupations and career paths. This includes labour market information (LMI). It may be provided in print form, but increasingly is web-based in nature;
- Career counselling, conducted on a one-to-one basis or in small groups, in which attention is focused on the distinctive career issues faced by individuals;
- Career education, as part of the educational curriculum, in which attention is paid to helping groups of individuals to develop the competences for managing their career development.[11]

As Watts points out, some definitions of career guidance only include the first two elements. The House of Commons Education Select Committee defined career guidance or careers counselling as a deeper intervention in which an individual's skills, attributes and interests are explored in relation to their career options.[12]

These definitions would include all activities in schools which are often referred to as career guidance or career development, but can also be referred to under a number of different ways such as Career Education, Information, Advice and Guidance (CEIAG) or Career Learning. These terms are all used in schools, in the literature, in practice and in this report.

Other terms used in career guidance in schools – and in this report, were recently defined by The House of Commons Education Select Committee and include:

- Careers advice – more in-depth explanation of information and how to access and use information;
- Work-related learning – the provision of opportunities to develop knowledge and understanding of work and to develop skills for employability through direct experiences of work.[13]

The following sections of this Appendix identify the themes of what good career guidance looks like, as published in these key reports.

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[9] Mann, A. and Virk, B. (2013). *Profound Employer Engagement in Education: What it is and Options for Scaling it up. A report for the Board of Trustees of the Edge Foundation by Dr Anthony Mann and Baljinder Virk*. London: Education and Employers Taskforce.

[10] OECD (2004). Careers Guidance and Public Policy: Bridging the Gap. Paris: OECD.

[11] Watts, A.G. (2010). *Career Guidance and Post-Secondary Vocational Education and Training. A paper prepared for the OECD Review of Post-Secondary Vocational Education and Training, Skills beyond School*. Paris: OECD.

[12] House of Commons Education Committee (2013). *Careers Guidance for Young People: The impact of the new duty on schools – Seventh Report of Session 2012–13*. London: The Stationery Office.

[13] House of Commons Education Committee (2013). *Careers Guidance for Young People: The impact of the new duty on schools – Seventh Report of Session 2012–13*. London: The Stationery Office.

SUMMARIES OF KEY RESOURCES

OFSTED: GOING IN THE RIGHT DIRECTION?

Ofsted (2013). *Going in the Right Direction? Careers guidance in schools from September 2012.* Manchester: Ofsted.

This study evaluated the impact of schools being legally responsible for securing access to independent and impartial career guidance. On the basis of inspections of 60 schools, Ofsted found that the provision in some schools was good; however, three-quarters of the schools visited were not implementing their duty to provide impartial careers advice effectively. The report made a series of recommendations including:

- The government should provide more explicit guidance to schools on careers advice and collect more accurate 'destination data';
- The National Careers Service should market more effectively to all young people and should do more to disseminate labour market information, particularly around shortages;
- Ofsted indicated that their own inspectors need to take greater account of career guidance and students' destinations in inspections.

The report identified some areas of good and best practice, including:

- School leadership – The report emphasised good leadership prioritising career guidance, and supported by a strategy and the Board of Governors, and where leaders and managers have made longer-term achievements and economic well-being a priority for their students.

- Activities within and outside the classroom – Best practice occurred when teachers used first-hand, industry-related knowledge to inspire their students and illuminate career opportunities related to a specific curriculum subject. These learning activities should include a range of subject lessons. Outside the classroom, schools need to ensure that work experience is a positive learning experience which provides students with the opportunity to explore their options.

- Career guidance interview – Good interviews have a number of features:
  - Pre-interview preparation;
  - Effective interpersonal skills from a skilled careers adviser;
  - Knowledge of local provision;
  - Breadth of information delivered in an unbiased way;
  - Flexibility in time allocated to students;
  - Confidential interview room with internet access;
  - Careers adviser having links with employers.

- Effective use of websites – The worst practice explored options in very little detail and then signposted a series of websites. The survey found that students also wanted guidance on using websites and that websites were only useful for generating ideas.

- Monitoring and quality – The report argued that schools should know whether pupils were receiving good career guidance, but also identified a number of mechanisms to support this:
  - Commissioned services should be monitored to ensure that they are of good quality;
  - Quality Awards are generally associated with good career guidance but are not guarantees of it;
  - Destination data should be used for all pupils not just those not in employment, education or training (NEET).

CEGS: REVIEWING THE EVIDENCE BASE FOR CAREERS WORK IN SCHOOLS

Bowes, L., Smith, D. & Morgan, S. (2005). *Reviewing the evidence base for careers work in schools: A systematic review of research literature into the impact of career education and guidance during key stage 3 and key stage 4 on young people's transitions.* Derby: University of Derby. Centre for Guidance Studies (CeGS).

The report provides a summary of the evidence from two systematic reviews of the literature into the impact of CEG at Key Stages 3 and 4, undertaken by CeGS, using the systematic review method developed by EPPI Centre.[14] The research summarised included 20 UK-based, empirical studies that met the criteria for the EPPI review centre and had been published between 1988–2004.

The evidence suggests that good quality CEG interventions can have a positive effect on young people and contribute towards the success of subsequent transitions made at Key Stages 3 and 4. However, the strength of this impact is mediated by a number of factors, such as young people's motivation and capabilities, family relationships and parental involvement in decision-making, gender, socio-economic constraints, environmental factors, peer group and the formal education system in general.[15]

Research by Morris *et al.* in 1998 and 1999 also suggests that young people with a high level of career guidance skills, including career exploration, self-awareness and self-confidence, are more likely to make satisfactory subject choices at Year 9 and less likely to modify their choices or switch courses post-16.[16] Interventions such as individual interviews, group-work sessions, career guidance information, and practical and work-related activities, along with specific CEG programmes, such as the Real Game and computer-assisted career guidance, have been shown to have a positive impact on the development of pupils' career guidance skills.[17]

The timing of CEG interventions can influence the effectiveness of interventions and subsequent transitions. There is evidence to indicate that young people would like more help with decision-making at times that best suit their needs. For some, this may be at a relatively early stage of their school career yet the demands of the school option-choice system can exert pressure on, and to some extent govern, the timing and outcomes of CEG interventions. Although young people do not need to take final decisions about post-16 options until Year 11, there is evidence to suggest that many, especially those who plan to remain in education, make their choices much earlier.[18]

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[14] Moon, S., Lilley, R., Morgan, S., Gray, S. & Krechowiecka, I. (2004). A systematic review of recent research into the impact of careers education and guidance on transitions from Key Stage 3 to Key Stage 4 (1988–2003). *Research Evidence in Education Library.* London: EPPI-Centre, Social Science Research Unit, Institute of Education.
Smith, D., Lilley, R., Marris, L., & Krechowiecka, I. (2005). A systematic review of research (1988–2004) into the impact of career education and guidance during Key Stage 4 on young people's transitions into post-16 opportunities. *Research Evidence in Education Library.* London: EPPI-Centre, Social Science Research Unit, Institute of Education.

[15] Looker D. & Dwyer, P. (1998). Rethinking research on the education transitions of youth in the 1990s. *Research in Post Compulsory Education*, 3: 5–25.

[16] Morris, M., Lines, A. & Golden, S. (1998). *The Impact of Careers Education and Guidance on Young People in Years 9 and 10: a Follow-up Study.* RD20. Sheffield: Department for Education and Employment.
Morris, M., Golden, S. & Lines, A. (1999). *The Impact of Careers Education and Guidance on Transition at 16.* RD21. Sheffield: Department for Education and Employment.

[17] Luzzo, D.A. & Pierce, G. (1996). Effects of DISCOVER on the career maturity of middle school students. *Career Development Quarterly*, 45(2): 170–172. Edwards, A., Barnes, A., Killeen, J. & Watts, A.G. (1999). *The Real Game: Evaluation of the UK National Pilot. NICEC Project Report.* Cambridge: Careers Research and Advisory Centre (CRAC).
Morris, M., Golden, S. & Lines, A. (1999). *The Impact of Careers Education and Guidance on Transition at 16.* RD21. Sheffield: Department for Education and Employment.
SWA Consulting (1998). *The Influence of Careers Education and Guidance upon Pupils in Year 11.* RD17A. Sheffield: Department for Education and Employment.
Rolfe, H. (2000). *Improving Responsiveness to the Labour Market among Young People.* RR190. London: Department for Education and Employment.

[18] Keys, W., Maychell, K., Evans, C., Brooks, R., Lee, B. & Pathak, S. (1998). *Staying On: a Study of Young People's Decisions about School Sixth Forms, Sixth-Form Colleges and Colleges of Further Education.* Slough: National Foundation for Educational Research.
Maychell, K., Evans, E., Brooks, R., Lee, B. & Pathak, S. (1998). *Leaving at 16: a Study of Factors Affecting Young People's Decision to Leave Full-Time Education.* Slough: National Foundation for Educational Research.

Care needs to be taken in the design and utilisation of career information to ensure that it is seen as relevant and appropriate by its target audience.[19] LMI might be more effective if it were presented in a range of formats and used successively in a variety of ways that appeal to different groups of young people.[20] The effectiveness of career sessions could be undermined by short tutor periods, carousel arrangements, inadequate differentiation and a lack of focus on learning outcomes.[21]

Pupils appear to value the involvement of people in the provision of career information, often seeing them as more important and/or more helpful than written sources of information. However, it is not simply the knowledge and expertise of careers advisers and other school staff that can influence young people's skill development and transitions: it is also their function as a catalyst, instilling a sense of urgency or necessity in pupils.

[19] Russell, M. & Wardman, M. (1998). *The Value of Information Types and Sources for Year 11 Decision Making. RD15*. London: Department for Education and Employment.

[20] Rolfe, H. (2000). *Improving Responsiveness to the Labour Market among Young People*. RR190. London: Department for Education and Employment.

[21] Morris, M., Rickinson, M. & Davies, D. (2001). *The Delivery of Careers Education and Guidance in Schools*. RR 296. London: Department for Education and Skills. Ofsted (1998). *National Survey of Careers Education and Guidance: Secondary Schools*. London: Ofsted.

PEARSON: CAREERS 2020: OPTIONS FOR FUTURE CAREERS WORK IN SCHOOLS

Hooley, T., Marriott, J., Watts, A.G. & Coiffait, L. (2012). *Careers 2020: Options for future careers work in English schools.* London: Pearson.

TABLE 1: A TAXONOMY OF SCHOOL-BASED CAREERS-WORK

Professional career counselling	Career advice delivered by a non-careers professional	Career assessments and tests	Curricular interventions	Frameworks for reflection	Further-learning/ work-related activities	Information provision	Other extra-curricular activities
Individual career counselling	Career support as part of a pastoral tutor system	Interest inventories	Career learning as part of PSHE	Use of portfolios and e-portfolios	Learning provider talks in school (college or other 16–19 provider)	Information on further studies	Careers fairs
Small-group career counselling	Other career advice delivered by someone other than a qualified careers professional	Psychometric assessments	Career learning as part of Citizenship	Action planning	Learning provider talks in-school (universities)	Information on occupations	Games and competitions
Access to telephone career counselling		Computer-assisted guidance systems	Career learning as a cross-curricular theme	Personal development planning	Visits to other 16–19 learning providers	Careers library	Inputs to assemblies
Access to online career counselling (e.g. email or chat)		Other career assessments	Career learning embedded in other subjects		Visits to universities	Access to careers websites	Parental involvement
			Long-block timetabling		Volunteering	Posters and displays	Mentoring programmes
			Separately timetabled careers lessons		Employer talks	Other labour market information (LMI)	Community/ civic participation
			Project work		Workplace visits		
			Online e-learning		Mini-enterprises		
					Work experience		
					Work shadowing		

Careers 2020 was sponsored by Pearson and provides an evidence-based review of careers work in English schools. This publication was used to inform a survey conducted by Pearson in spring 2013 of school staff involved in the planning or delivery of career guidance in schools. The survey reviewed the current practice in English schools to ascertain whether it had deteriorated since the changes in career guidance policy in schools. The final report was published in September 2013.[22]

Based on the research evidence, the *Careers 2020* report suggests that successful career guidance in schools could include eight activities: information provision; career assessments and tests; career counselling; careers advice delivered by a non-careers professionals (employers, mentors); curricular interventions; further study/ work-related learning; other extra-curricular interventions; and frameworks for reflection.[23] The activities identified were based on what the research evidence describes as good practice, but the activities were not meant to be hierarchical, instead schools should be left to choose a range of activities that meet their needs.

The report also identifies three types of approaches to manage the components of successful careers work: activity-based approaches; service-based approaches; and curriculum-led approaches. It argues there is a strong evidence base, in particular drawn from Norman Gysbers' work in the United States on the Comprehensive Guidance Program.[24] This argues that curriculum-led approaches, in which careers activities are linked to the curriculum, are the most effective. The curriculum-based approach sees careers as an important focal point for learning, where the various components of career work are integrated into the mainstream curriculum to provide a coherent, meaningful and developmental education.

The report concludes by asking a number of questions for policy-makers, schools and researchers on how they respond to the challenges in delivering career guidance within schools.

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[22] Coiffait, L. (2013). *A Cloudy Horizon: Careers Services in England Careers 2020 Phase Two*. London: Pearson.

[23] Dykeman, C., Ingram, M., Wood, C., Charles, S., Chen, M. & Herr, E.L. (2001). *The Taxonomy of Career Development Interventions that Occur in America's Secondary Schools*. Center for Vocational Education, Ohio State University: National Dissemination Center for Career and Technical Education.
Law, B. (2001). *New Thinking for Connexions and Citizenship*. CeGS Occasional Paper. Derby: Centre for Guidance Studies, University of Derby.
Donoghue, J. (ed) (2008). *Better Practice: A Guide to Delivering Effective Career Learning 11–19*. Godalming: Advisers and Inspectors for Careers Education.

[24] Gysbers, N.C. (1997). Developing and implementing comprehensive school guidance programs: Some key points to remember. *Comprehensive Guidance Programs That Work*. Gysbers, N.C. & Henderson, P. (eds): 293–295. Greensboro, NC: ERIC/CASS.
Gysbers, N.C. (2005). Comprehensive school guidance programs in the United States: A career profile. *International Journal for Educational and Vocational Guidance,* 5(2): 203–215.

DFES: HOW DO YOUNG PEOPLE MAKE CHOICES AT 14 AND 16?

Blenkinsop, S., McCrone, T., Wade, P. and Morris, M. (2006). *How do young people make choices at 14 and 16? (DfES Research Report 773)*. London: DfES.

The Department for Education and Skills (DfES) commissioned the National Foundation for Educational Research (NFER) to explore how young people make the educational choices required of them at ages 14 and 16. The study was based on the issues identified in the Tomlinson review (Working Group on 14–19 Reform, 2004) which argued that choices people make early in school have a significant impact on the future direction of young people's education and training. The review concluded that there needed to be a better understanding of how young people make decisions before the mechanisms to support this process are further developed.

The methodology for the review was a two-stage approach. Wave 1 (February to May 2005) centred on interviews with 165 young people in Years 9 and 11 in 14 schools, exploring the choices they were making at that time. The same young people were revisited during wave 2 (October to December 2005), allowing them to reflect on the decisions they had made at the end of the previous Key Stage. The research was supplemented with telephone interviews with 47 parents (26 parents of the Year 9 students and 21 parents of the Year 11 students.

The main findings were that schools can positively influence students' decision-making, particularly if the school was effective in relation to curriculum management, student support, developing high staff and student expectations, creating external partnerships (such as with employers) and school leadership. In addition, they found that young people valued having sufficient time to make choices and the opportunity to have individual conversations with teachers to discuss their options. They valued having detailed, clear and impartial information on courses and pathways so that they could make informed choices. The research also found that teachers tended to give advice that lacked impartiality, often encouraging children to go into the school Sixth Form, without fully exploring other options.

The findings specific to CEG were that it was deemed to be most effective when it was comprehensive and impartial, delivered by trained staff within the school with the support of external professionals (e.g. Connexions) and was linked to a dedicated part of the curriculum. They also found that students' decision-making was more considered and rational when students felt supported in decision-making by the school. When they were supported in this way they were more influenced by school factors (such as individual talks with teachers and the CEG provision) and less reliant on external factors (such as friends and family).

However, even in schools with the most effective practice, young people did not always make the links between CEG and the decisions they were making about the future. This suggests that schools need to make the links between career education and decision-making more explicit.

To make informed decisions young people required more detailed, clear information on subject options for Key Stage 4 (particularly on subject content, modules and topics covered, for instance), coursework and future post-16 pathways. In addition, the researchers felt that in some instances information might be more appropriately provided by external experts who are more likely to have a broader range of information and be impartial. They also found that young people valued personalised support from teachers, but that some teachers did not have the breadth of knowledge to deliver this effectively. In addition, they found that students valued a mixture of methods of support (such as one-to-one discussions, group exercises, literature on options) depending on their learning style.

The research also explored the students' decision-making types, which they identified based on eight categories from the educational mindsets research developed by SHM.[25] The eight educational mindsets SHM identified were: confident; aspirational; determined realist; long-term preparer; indecisive worrier; short-term conformist; unrealistic dreamer; comfort seeker; and defeated coper.

Based on the findings with pupils, Blenkinsop *et al*. identified that the majority of students fitted into six categories. They argued that the way students made decisions depended on a range of factors including how optimistic they were, how clearly they viewed their future, how willing they were to take risks and whether they felt that success was a result of hard work or luck. Determined realist was the most common category identified (101 students across the two cohorts). These are students who have a firm idea of the job they would like to do. The next most likely categories for a student to fall under are comfort-seeker (43 students) and short-term conformist (40 students). These groups have little clear idea of what they should do in the future, but tended to be influenced by one or two people in making decisions. Confident aspirationals were only identified in nine students across the cohorts and they were people who were confident about their future and ambitious, but tended to be unrealistic in their expectations. Four students were identified as long-term planners. These are students who did not have a clear plan for the future, but believed that continuing in education was the best route to success. The final category included the defeated copers (14 students), indecisive worriers (seven students) and unrealistic dreamers (two students) who needed the most support as they were found to be the category that held the most negative decision-making processes and were the least likely to change over time. This research was limited in that around a quarter of the students across the cohorts did not fit comfortably into any of the categories identified and it was possible for students to move between the categories as the students developed their ideas.

The research concluded that schools needed to be aware of these different decision-making styles in designing the most effective personalised support. In addition they argued that schools that were student-centred with the most comprehensive advice, guidance and support strategies in place were more likely to have students with the more positive decision-making mindsets who made the most effective and realistic decisions.

[25] SHM (2006). *Mindset Profiles: Segmenting Decision-Makers at Ages 14 and 16. DfES Research Report RW67.* London: DfES.

ANDREWS: THE FUTURE OF CAREERS WORK IN SCHOOLS IN ENGLAND

Andrews, D. (2013). *The future of careers work in schools in England.*

This discussion paper was published in March 2013 on David Andrews' website and was followed by two supplementary papers. The first supplementary report in June 2013 discussed the Department for Education's revised Statutory Guidance for schools, the government's response to the Education Select Committee's report, and the National Careers Council's first report. The second supplementary report in December 2013 covered the findings from Ofsted's thematic review of career guidance in schools and the government's response both to Ofsted recommendations and those from the National Careers Council.

The original discussion paper was written to stimulate debate on the future options for career guidance in English schools. The report explored three options. The first option was 'retaining the school-commissioned career guidance model but strengthening the arrangements'. This approach is essentially the current model, however, Andrews recommends that the Statutory Guidance from the Department for Education (DfE) should be strengthened to highlight the importance of face-to-face guidance, to require schools to commission career guidance only from providers with the matrix standard, and also to require schools to use only professionally qualified careers advisers. He also argues that the model would be further enhanced by allocating schools funding for commissioning career guidance and supporting schools by either making Local Authorities statutorily responsible for career guidance provision, or by extending the remit of the National Careers Service (NCS).

The second option, 'returning to the partnership model, building on the new, all-age NCS', would require the remit and budget of the NCS to be increased.[26] In addition, under this model, the service would be delivered through regional contracts with providers that were matrix-accredited and that employed professionally qualified careers advisers. NCS providers would also support schools in delivering career education in schools.

The third option, 'moving to a school-based career development adviser model', would require all schools to employ their own career development advisers who would be responsible for providing face-to-face career guidance to pupils and who could also work with teaching staff to plan and deliver programmes of career education. Schools would be given an allocation of funding, based on pupil numbers, to appoint the advisers who would be required to hold, or be working towards, a relevant professional qualification. In addition, career development advisers in schools would be supported by LMI supplied by the NCS and professional development opportunities provided through a partnership between the NCS and the new professional body, the Career Development Institute. Monitoring and accountability would be covered by revising the Ofsted inspection framework to require inspection teams to report on the quality and impartiality of career education and guidance provided and the impact on pupil outcomes.

The report also argues that the current system of career guidance (based on school autonomy) is leading to deterioration in the level of provision to young people.

The report concludes by asking questions about what readers of the report think about the models suggested, whether there are other models that need to be explored and what further research is needed to investigate the options.

[26] Partnership model is a partnership between schools (careers education) and external careers services.

NFER: INFORMATION, ADVICE AND GUIDANCE FOR YOUNG PEOPLE

McCrone, T., Gardiner, C., Southcott, C. and I, Featherstone, G. (2010). *Information, advice and guidance for young people.* Slough: NFER.

In February 2010, the Local Government Association commissioned NFER to undertake research on the current 'fitness for purpose' of the Information, Advice and Guidance (IAG) service provided to young people in the 14–19 context, and to identify improvement and support needs for Local Authorities (LAs). The research was commissioned prior to the UK general election (in May 2010) and was intended to inform preparation for the review of IAG services that the Labour government had planned to conduct in 2011.

The study used an online questionnaire of Heads of Connexions and LA strategic managers with responsibility for IAG and thus was focused on a service provider's perspective. The researchers also conducted advocacy interviews with respondents from areas with evidence of at least one aspect of IAG-related provision considered to be good practice, providing examples of IAG provision that could be replicated. The report identified a number of areas of what good practice looked like, which included:

- Partnership working – This was considered the most important aspect of practice in the survey. Examples of partnerships included education (other schools and colleges; Children's Services; 14–19 partnerships), and employers (Jobcentre Plus; local employers).
- Targeting vulnerable young people – Early identification of vulnerable young people to enable targeting was considered important to good IAG. Examples included mentoring schemes, embedding IAG in positive activities to overcome disengagement, and a holistic and personalised service to young people.
- Ownership of IAG strategy – Direction at a strategic level and ownership and 'buy-in' by staff at all levels were identified as further characteristics of good IAG.
- IAG accreditation and standards – Achieving accreditation was cited as representing good IAG but respondents listed numerous different standards and kitemarks with little consistency.
- Staff qualifications and training – Interestingly some responses considered good practice as being related to the training of school-based staff delivering and managing IAG, as well as CPD.
- IAG events – These included events aimed at engaging staff (from a variety of places), young people, parents and training providers (and sometimes bringing together all of these). Types of events included supporting Year 9 option choices, theatre education tours, mentoring projects, careers fairs and staff conferences.
- Personalised IAG – Tailored to individual needs and within a local geographical context.
- Other features – These included: effective monitoring, involving young people, quality information resources and joined-up holistic approaches.

ACEG: BETTER PRACTICE : A GUIDE TO DELIVERING EFFECTIVE CAREER LEARNING 11–19

Donoghue, J. (ed) (2008). *Better Practice: A guide to delivering effective career learning 11–19.* Godalming: Advisers and Inspectors for Careers Education.

This document was designed by a number of careers practitioners. Its purpose was to help people who support and coordinate career education for young people aged 11–19 in their work. In 2008, a number of schools were appointing careers coordinators in schools to take over some of the support tasks that were formerly undertaken by teaching staff.

The guide is aimed at careers coordinators and identifies eight characteristics that are needed for the improvement of careers work infrastructure:

– Having a clear vision to provide strategic direction and clear decision-making criteria to support the further development of careers services;
– Management support to ensure that careers work and related activities are integrated into the learning offer and contribute to the achievement of strategic priorities;
– Co-ordination to ensure that CEIAG activities are coherent, run smoothly and benefit young people;
– Planned programme for 11–19-year-olds to secure progression and continuity in career learning for young people across different Key Stages, phases and learning settings;
– Appropriate resources to ensure that young people achieve the desired outcomes from career education and related IAG activities;
– Partnership working to enrich CEIAG activities through an extended range of opportunities, contacts, resources and expertise;
– Partnership agreements to clarify the distinctive contribution that other partners, especially external IAG providers, will make to careers;
– Monitoring, review and evaluation to ensure that provision and practice are of good quality and fit for purpose and that further developments flow from evidence-based judgements;
– Professional development to ensure that staff and others have the knowledge and skills they need.

The report also identifies eight approaches to career learning, arguing that a variety of personalised learning approaches work best in making career guidance accessible to young people. The approaches are:

– Portfolio-based learning – Involves using a career portfolio to engage young people. A career portfolio has four stages which include: recording activities that young people can use as a record of achievement; planning, which allows young people to set goals and targets and work out how to achieve them (e.g. individual learning plan); reflection, allowing young people to understand their progress and set new goals; and telling, which allow young people to show what they have learned (e.g. at parents' evenings and progress reviews);
– Co-operative learning – Where learning is a social activity and co-operative learning helps young people to appreciate the importance of teamwork and team-based learning in the workplace and other settings;
– Learning through classroom talk (dialogic teaching) – Allows students to learn about careers by talking through their personal career values and goals;
– Active learning – Involves young people learning through doing and can include case study learning, role-plays, simulations, games, negotiation and design-and-make tasks. Active learning may benefit from employers' involvement in their design and delivery;
– Experiential learning – Occurs when young people experience a first-hand engagement with something such as work experience, a theatrical performance, a residential trip or community service;
– Problem-based learning – Involves giving learners a problem to solve and is most successful when young people work in pairs or groups. Giving young people career-related problems to solve gives them insights into how to manage their own careers;

– Learning by educating others – Involves young people sharing their learning with others in order to enhance young people's career learning. Activities could involve creating an exhibition or display, producing a video or podcast, developing a website, blog or wiki, writing a newsletter, giving a presentation or peer mentoring;
– Learning through didactic approaches – Involves transmitting information using techniques such as 'listen and tell' or 'question and answer'. These work reasonably well with straightforward learning tasks that focus on gaining procedural knowledge (e.g. how to make applications), but even here they may be insufficient to stimulate higher order learning about topics (e.g. synthesising and evaluating information).

In the remaining chapters the report discusses meeting learner needs through focusing on ability, promoting equal opportunities, using ICT in delivery, and working in partnership with IAG providers, community, and young people. It concludes with a section on the importance of evaluating the impact of career interventions.

CDI: THE ACEG FRAMEWORK FOR CAREERS EDUCATION AND WORK-RELATED EDUCATION

Career Development Institute (CDI) (2013). *The ACEG framework for careers and work-related education. A practical guide.* Stourbridge: CDI.

This was first published in April 2012 by the Association for Careers Education and Guidance (ACEG), which was then the professional body for career guidance practitioners based in schools. In 2013, it was republished by the Career Development Institute (CDI), which is the new professional body representing all practitioners in the sector. It is a grid of outcome statements for 17 areas of career and work-related learning at Key Stages 2, 3 and 4 and post-16. The rationale for this integrated framework was that careers and work-related education share close and overlapping concerns which justify the development of a single and integrated framework. The ACEG framework has three overarching aims:

– Developing yourself through careers and work-related education;
– Learning about careers and the world of work;
– Developing your career management and employability skills.

Chapter five describes what good careers and work-related learning look like and their key features. It identifies approaches that work in careers and work-related education such as:

– Portfolio learning – A careers portfolio or e-portfolio is a collection of materials put together by the learner to support their career development, e.g. skills profile, action plans, personal statements, CVs, experiences and achievements log, certificates, careers research, and record of applications. It is viewed as a useful tool to encourage reflection and review;
– Tutoring, coaching and mentoring – This kind of support is given to individuals or small groups by dedicated staff to facilitate their learning and development. It suggests that tutoring, coaching and mentoring imply differences of emphasis but the roles overlap depending on how individual staff choose to interpret their duties. Tutors tend to focus on helping individuals to manage their learning, providing pastoral support, teaching aspects of personal development and carrying out administrative duties. Coaches motivate individuals and help them to perform at their best so they can achieve their goals;
– Tests and questionnaires – These can include self-assessment tools, e.g. card sorts, questionnaires, psychometric tests, occupational interest questionnaires and aptitude tests. They can be successful as they tend to give students an immediate response which helps them to think about their options and reflect. However, students do need guidance in using them;
– Information and communication-based learning – There are a number of ways of communicating career information such as websites, apps, social networking media (e.g. Facebook, Twitter, YouTube), virtual worlds (e.g. Second Life) and augmented reality environments. However, students need help and support when using technology to avoid them wasting their time and to keep them safe online.

The report also identifies a number of different career learning styles based around teaching styles, which is similar to Donoghue.[27]

[27] Donoghue, J. (ed) (2008). *Better Practice: A Guide to Delivering Effective Career Learning 11–19.* Godalming: Advisers and Inspectors for Careers Education.

CAREERS PROFESSION TASK FORCE: TOWARDS A STRONG CAREERS PROFESSION

Careers Profession Task Force (2010). *Towards a strong careers profession: An independent report to the Department for Education.* London: DfE.

The Task Force, chaired by Dame Ruth Silver, reported to DfE in 2010. Whilst focusing on the role of adviser, the report provided a summary of the way in which a careers professional might help young people. As such, this is a statement of what a good careers professional should be expected to deliver in a school or other environments using a partnership model.

The report argues that careers professionals provide young people with impartial Career Education, Information, Advice and Guidance (CEIAG) that: challenges preconceptions and stereotypes; is free from institutional bias; values both academic and vocational routes; and is informed by the labour market. This helps young people to:

– Choose the subjects and qualification routes that are right for them and meet their aspirations for further and higher education, work-based learning and work;
– Make decisions that enable them to achieve in education to the highest possible level.

The report also identifies how a careers professional contributes to a young person's preparation for, and understanding of, the world of work. It describes how they can support them to prosper and progress through understanding opportunities, such as in the labour market, and through further and higher education and to gain experience relevant to work.

The report concluded with a number of recommendations to strengthen the profession and thereby improve services to clients, which included:

– The government strengthening the partnership model in schools;
– The government supporting the development of a single professional body, which eventually became the Career Development Institute (but did not include higher education, with the Association of Graduate Careers Advisory Services (AGCAS) remaining as the representative body);
– Common professional standards and a common code of ethics for the sector;
– Minimum qualification for practice at Level 6;
– A more diverse workforce, through recognising the importance of the work-based route into the profession;
– Continuing professional development for all careers workers. Initial training and CPD should include a focus on LMI, ICT, and STEM;
– Careers advisers and careers educators considering themselves to be careers professionals;
– National kitemark established to validate the different CEIAG quality awards and quality awards for all providers;
– Sharing good practice within the sector;
– An Ofsted thematic review.

DCSF: PRINCIPLES OF IMPARTIAL CAREERS EDUCATION

DCSF (2009). *Statutory Guidance: Impartial careers education.* London: DCSF.

The previous Labour government published this guidance, alongside a strategy for IAG called 'Quality, Choice and Aspiration'. The strategy was a response to the IAG issues raised by the Milburn 'Fair Access to the Professions' report.[28] The themes of the strategy reflect policy themes rather than evidence to support the investigation of 'what good looks like'. Nevertheless, the Annex includes a full explanation of the 'Principles of Impartial Careers Education', which are useful. The six principles of good quality, impartial career education are that it:

- Empowers young people to plan and manage their own futures;
- Responds to the needs of each learner;
- Provides comprehensive information and advice;
- Raises aspirations;
- Actively promotes equality of opportunity and challenges stereotypes;
- Helps young people to progress.

The guidance also includes a checklist of what school leaders should ensure, which includes:

- Reviewing how career education is delivered within the school with reference to the Principles of Impartial Careers Education;
- Placing career education/IAG at the centre of the work of the school and communicating its importance;
- Providing the responsible senior leader with the autonomy and resources that they need to fulfil their role;
- Ensuring responsibilities are further devolved to a middle leader (the 'careers leader' or 'careers coordinator');
- Putting in place consistent and effective arrangements for providing career education teachers with the knowledge and skills that they need to perform effectively;
- Providing mothers, fathers and other carers with information about the services that are available to help young people;
- Encouraging teachers to enliven and enhance their teaching by providing a work-related context for their pupils' learning;
- Considering whether, and how, more emphasis should be placed on experiential learning to inform pupil's understanding of learning and work opportunities;
- Appointing a 'lead' for the local 14–19 prospectus and ensuring that information about school courses is updated at key points during the academic year;
- Ensuring that career education provision is effective in challenging stereotyping, opening up access to work-related learning for disabled young people and promoting access to higher education;
- Ensuring that learners receive the support they need to gain a suitable place in learning under the September Guarantee;
- Conducting regular internal reviews (engaging at least one governor) of the quality of careers provision and develop a plan to address weaknesses.

[28] Milburn, A. (2009). *Unleashing Aspiration: The Final Report of the Panel on Fair Access to the Professions*. London: Cabinet Office.

QUALITY IN CAREERS

DCSF: QUALITY STANDARDS FOR YOUNG PEOPLE'S INFORMATION, ADVICE AND GUIDANCE

Department for Children, Schools and Families (DCSF) (2007). *Quality standards for young people's information, advice and guidance (IAG).* London: DCSF.

These quality standards were developed by the DCSF and launched in 2007 and do not form part of current government policy. However, when they were released they were widely welcomed and endorsed at the time by a large number of key stakeholders, including the Association of Directors of Children's Services (ADCS) and the Institute of Career Guidance. The standards were designed to inform Local Authorities who were assuming responsibility for commissioning IAG services in their areas. The quality standards had 12 interlinked elements:

- Young people are informed about how IAG services can help them and how to access the services they need;
- Young people receive IAG on personal well-being and financial capability issues that they need;
- Young people have the information they need to make well-informed and realistic decisions about learning and career options;
- Young people have the advice and guidance that they need to make well-informed and realistic decisions about learning and careers;
- IAG services promote equality of opportunity, celebrate diversity and challenge stereotypes;
- Young people (reflecting the make-up of their communities) are engaged in the design, delivery and evaluation of IAG provision;
- Parents and carers know how IAG services can help their children and know how these services are accessed;
- IAG providers understand their roles and responsibilities;
- Programmes of career and personal development for young people are planned and provided collaboratively;
- Staff providing IAG are appropriately qualified, work to relevant professional standards and receive continuing professional development;
- IAG services are regularly and systematically monitored, reviewed and evaluated, and actions are taken to improve services in response to the findings;
- Processes for commissioning impartial IAG services are effective and result in services that meet the needs of parents/carers and young people.

CAREERS ENGLAND: THE QUALITY IN CAREERS STANDARD

Careers England (2011). *The Quality in Careers Standard Guide: A guide for CEIAG quality award providers.* Careers England.

Careers England (2014). *Quality in Careers Standard.* Careers England.

There are many different quality awards for career education, information, advice and guidance operating in England. Careers England have coordinated the development of national validation criteria for these awards. If an award meets the validation criteria then it should be a measure of quality which schools can achieve. There are currently over 1,100 schools, colleges and work-based learning providers in England who either hold, or are working towards, a CEIAG Quality Award (April 2014). The Ofsted review of career guidance in 2013 found that quality awards are generally associated with good career guidance but are not guarantees of it.

The Quality in Careers Standard validation criteria request that providers must furnish evidence demonstrating that their CEIAG Award meets the following criteria:

- Providing effective leadership, management and delivery of CEIAG;
- Ensuring appropriate initial staff training and continuous professional development to secure the competency required of all staff involved in planning and implementing CEIAG provision;
- Providing a career education and work-related learning curriculum, careers information, and careers advice and guidance;
- Securing independent and impartial careers advice and guidance for young people;
- Working with external partners and agencies;
- Involving and supporting families and carers;
- Monitoring, reviewing, evaluating and developing provision;
- Measuring the impact of provision (including evidence of learning outcomes and progression).

OFSTED: SUBSIDIARY GUIDANCE SUPPORTING THE INSPECTION OF MAINTAINED SCHOOLS AND ACADEMIES

Ofsted (2013). *Subsidiary guidance supporting the inspection of maintained schools and academies.* Manchester: Ofsted.

Ofsted (2013). *The framework for school inspection.* Manchester: Ofsted.

Ofsted (2013). *School inspection handbook*. Manchester: Ofsted.

The role of Ofsted in inspecting has caused a great deal of debate within the career guidance community as there is an uneven level of inspection, with some inspections asking nothing about career guidance within the overall school inspection. In March 2013, the Chief Inspector of Schools, Sir Michael Wilshaw, committed to placing greater emphasis on the inspection of careers advice and guidance as part of planned changes to the Ofsted inspection framework. The following section describes the guidance that Ofsted Inspectors can refer to when inspecting schools career guidance practice.

This subsidiary guidance should be used in conjunction with the School Inspection Handbook and the Framework for School Inspection. The framework for inspection contains no sections on career guidance and the Handbook only says that inspectors should cover:

– Timely independent information, advice and guidance to assist pupils on their next steps in training, education or employment (paragraph 139).

For career guidance the subsidiary guidance for evaluating the curriculum (paragraph 121) states:

– Inspectors will want to discuss with pupils their knowledge of courses and qualifications and the various progression routes available to them in order to understand the quality of advice provided by the school;
– They will want to explore the extent to which timely information, advice and guidance provides pupils with a good understanding of the full range of options available to assist them to make informed decisions about their next steps in education, training or employment; the availability and quality of advice and guidance on learning and career pathways; and whether staff have the necessary qualifications, experience and skills to provide information, advice and guidance.

In addition under paragraph 49:

– Inspectors should take account of retention rates when evaluating achievement and when considering the quality of the curriculum and of information, advice and guidance.

The 2013 Sixth Form PANDA (Ofsted's Performance and Assessment Reports) contains retention rates based on post-16 learning, provided by schools in the 2012 autumn census, matched to unamended 2013 examination data. Both school and national figures are provided. Inspectors should take into account potential sources of error in the census data and any unamended examination data.

In the Qualification Success Rate report, inspectors should consider retention rates for subjects, groups and qualifications as a whole, in particular AS-level and A-level. Subject retention compares the number of students starting a subject (normally measured at 1st November in a given year) and the number completing a subject (normally measured at the end of May in a given year). Although subject retention should be considered separately for each of the AS and A2 components of the A-level programme, it is useful to look at two-year retention across key subjects where there was clear intent of a two-year course of study. However, there are no national figures available for comparison.

STEM AND CAREERS FROM STEM

NATIONAL STEM CENTRE: SCHOOL ORGANISATION AND STEM CAREER-RELATED LEARNING

Hutchinson, J. (2013). *School organisation and STEM career-related learning.* York: National STEM Centre.

This study summarised a two-year, two-phase research study based on the participation of nine case study schools with a follow-up national survey of STEM leaders in schools. The perspective offered on good careers practice comes from STEM leaders within the school.

The case studies focused on practice in schools, drawing from testimonies of headteachers, heads of science, maths or design and technology, some STEM coordinators and pupils in four of the nine schools. The research sought to understand what took place within schools that could contribute to all pupils' knowledge and understanding about careers and learning pathways, and what drivers encouraged schools to focus on providing a range of opportunities to learn more about careers and about careers in STEM areas.

The case study work was followed by a national self-completion survey which attracted nearly 200 responses mainly from heads of the STEM subjects. The scope of the survey also included questions to explore the broader strands of the National STEM Centre's careers project and therefore included questions about the update of CPD opportunities and awareness of web-based resources.

The research found good practice in a number of different schools, but no pattern of location, school type, size or governance structure could be identified that would determine which schools might or might not offer good STEM career guidance opportunities. Factors that supported good learning opportunities for pupils included:

- Commitment by school leaders within a structure which delegated responsibilities for STEM and career guidance across teaching teams;
- Integration of career learning within the subject curricula – in particular drawing on the experiences of teachers' working lives pre-teaching;
- A good programme of career education and guidance opportunities for pupils;
- Integration of career guidance within enhancement and enrichment activities in STEM subject areas;
- Schools being networked within their local communities, including networks with employers, other schools, colleges and universities, and local authorities;
- A focus on progression alongside attainment as part of the schools culture evidenced through links with learning providers and knowledge of progression statistics.

However, the research also found that the heads of STEM subjects had notable knowledge in relation to commissioned career guidance providers, website resources (other than UCAS), and the types of career-related learning that existed within other parts of the curriculum.

ASPIRES: SCIENCE ASPIRATIONS AND CAREER CHOICE: AGE 10–14

Department of Education & Professional Studies, King's College London (2013). *ASPIRES: Science aspirations and career choice: age 10–14. Final report.* London: King's College London.

The project was a five-year longitudinal study, funded by the Economic and Social Research Council (ESRC) as part of their Targeted Initiative on Science and Mathematics Education (TISME). The project started in 2009 and is based at King's College London. One of the main objectives of the project was to investigate some of the factors influencing the educational choices made by children in the 10–14 age group. Particular interest focused on the influence of peers, parents and schools, and on the role gender, class and ethnicity play in shaping these choices.

The study combined quantitative online surveys of a student cohort and repeat (longitudinal) interviews with a selected sub-sample of students and their parents. Survey and interview data were collected at three time points: the end of primary school (age 10/11, Year 6), the second year of secondary school (age 12/13, Year 8) and the third year of secondary school (age 13/14, Year 9). In total, over 19,000 surveys were completed: 9,319 by Year 6 students, 5,634 by Year 8 students and 4,600 by Year 9 students. A sample of 83 students and 65 of their parents were also longitudinally tracked via interviews across this age range. In addition to researching influences on students' aspirations, the project also worked with a small group of London teachers to develop approaches for integrating STEM careers information into Key Stage 3 science lessons.

The findings of the report relating to career education said that it needs to help broaden students' awareness of the transferability of science qualifications for a wide range of careers both in and beyond science, at degree and technical levels. They also argued that current provision did not start early enough and was too limited. They alluded to the widespread concern that career guidance is poorly resourced and that it may not be effective. They also recognised that teachers are an influential and trusted source of CEIAG.

It recommends that policy-makers and schools should consider embedding STEM careers awareness in science lessons promoting embedded models of career education, in which curriculum learning is systematically linked to a wide range of real life careers and applications. This type of approach has been found to be effective in raising student engagement and attainment and has the advantage of reaching all students – but successful implementation will require appropriate policy levers and practical support for teachers.

The other key findings were that firstly, students have high aspirations but not for a science career and that these aspirations remain consistent over the 10–14 age range. Few young people (approximately 15%) aspire to become a scientist. This aspiration remains consistently low across the 10–14 age range. It is lower than many other types of aspiration and appears disproportionately low compared to students' reported interest in science, although STEM-related careers, such as in medicine, are more popular aspirations. Business is the most popular aspiration among secondary school students, with almost 60% of young people agreeing that they would like a career in business.

Secondly, they found that students who express the most positive views of school science are also those most likely to aspire to science careers. However, student attitudes to school science do not fully explain science aspirations. Their findings show that most young people report liking school science from Year 6 (at primary school) through to Year 9 (the end of Key Stage 3 in secondary school). 42% of Year 9 students are interested in studying more science in the future. Students also report positive views of scientists and say that their parents think it is important for them to learn science. However, despite these widely held positive views, the majority of 10–14-year-olds do not aspire to become scientists.

They found that families exert a considerable influence on students' aspirations. This influence operates in many ways, but a key factor affecting the likelihood of a student aspiring to a science-related career by the age of 14 is the amount of 'science capital' a family has. Science capital refers to science-related qualifications, understanding, knowledge (about science and 'how it works'), interest and social contacts (e.g. knowing someone who works in a science-related job).

Science capital is unevenly spread across societal groups. Those with higher levels of science capital tend to be middle-class – although this is not always the case, and not all middle-class families possess much science capital. Students from families with medium or high science capital are more likely to aspire to science and STEM-related careers and are more likely to plan to study science post-16. Longitudinal tracking showed that students with low science capital who do not express STEM related aspirations at age 10 are unlikely to develop STEM aspirations by the age of 14.

Most students and families are unaware of where science can lead. This is based on the science capital idea, where most young people and their parents have a narrow view of where science can lead. The widespread view – that science qualifications lead primarily to a job as either a scientist, science teacher or doctor – is contributing to many young people seeing post-16 science qualifications as 'not relevant for me'. Those young people who are aware of the transferability of science qualifications are more likely to aspire to STEM-related careers and/or plan to study science post-16.

The 'brainy' image of scientists and science careers puts many young people off. Over 80% of young people in the surveys agreed that 'scientists are brainy'. This association influences many young people's views of science careers as 'not for me'. Students who do not consider themselves as being among the 'brainiest' in the class are unlikely to see science careers as achievable – even if they find science interesting and attain well in the subject.

Finally, a student is least likely to see science as 'for me' if she is female, white, has low/very low levels of cultural capital, is in the bottom set and does not have any family members who use science in their jobs. Gender issues are evident from a young age. Girls are less likely than boys to aspire to science careers, even though a higher percentage of girls than boys rate science as their favourite subject. Girls are far more likely to aspire to arts-related and 'caring' careers. Among 12–13-year-old students, 18% of boys and 12% of girls aspire to become scientists – in comparison, 64% of girls aspire to careers in the arts. Girls who define themselves as 'girly' (highly feminine) are particularly unlikely to aspire to a career in science. Girls who do aspire to science and STEM-related careers tend to be highly academic and are more likely to describe themselves as 'not girly'. Those 'girly' girls who do aspire to science careers at age 10/11 tend to either drop or change these aspirations over time. The factors which hinder students from developing science aspirations are amplified in the case of black students, due to the multiple inequalities they face. This means that science aspirations are particularly precarious among these students.

TISME: THE TARGETED INITIATIVE ON SCIENCE AND MATHEMATICS EDUCATION

The Targeted Initiative on Science and Mathematics Education (TISME) is a programme of research funded by the ESRC in partnership with the Gatsby Charitable Foundation, The Institute of Physics and the Association of Science Education. The programme launched in the summer of 2010 and runs until 2014. The project is coordinated from the Department of Education and Professional Studies at King's College London.

The project has five major projects with in it:

1) ASPIRES – Science Aspirations and Career Choice: Age 10–14 (see above).

2) EISER – Enactment and Impact of Science Education Reform based at the University of Leeds.

   This project is exploring schools' responses to changes in the science curriculum for 14–16-year-olds as a result of reforms. The study combines nationally representative data, using the National Pupil Database, and in-depth school-based case studies. Data will be collected over a three year period enabling a longitudinal analysis of the developing enactment and impact of these reforms. A particular focus is on teachers' experiences of working with the new science curriculum in the classroom. The study is also investigating the impact of these reforms on student achievement, student attitudes towards science education and participation in post-compulsory science courses.

3) epiSTEMe – Effecting Principled Improvement in STEM Education: Student Engagement and Learning in Early Secondary School Physical Science and Mathematics based at the University of Cambridge.

   This project aimed to improve the image of physical science and mathematics for young people in secondary schools. Currently they have redesigned key aspects of the teaching and learning of these subjects at the formative early-secondary stage, developing a principled approach that is expected to be more effective in engaging students and guiding them towards understanding. Insights from several social scientific fields – concerned with conceptual growth, identity formation, classroom dialogue, collaborative learning, and relations between everyday and formal understanding – have guided the design of an intervention suitable for widespread use in normal school settings.

   Phase 1 involved collaboration with teachers from several schools to devise and pilot the intervention. In Phase 2, classroom implementation by these teachers is being analysed, and the intervention refined accordingly. Phase 3 will evaluate repeated implementation by the cooperating teachers, alongside initial implementation by teachers from a wider range of schools, compared to the established practice of a control group of teachers from similar schools.

4) ICCAMS – Increasing Competence and Confidence in Algebra and Multiplicative Structures based at King's College London.

   The ICCAMS project is examining ways of raising students' attainment and engagement by using classroom-based assessment to inform teaching and learning. The study has conducted a large nationally representative survey of around 7,000 students examining the understanding and attitudes of current students.

   This survey uses tests first developed by the Concepts in Secondary Mathematics and Science study, enabling a comparison with the understanding of students in the 1970s. They are also working collaboratively with a group of teachers to develop a research-informed approach to the teaching of algebra and multiplicative reasoning focusing in particular on formative assessment. The work is informed by the extensive research literature on the teaching of algebraic and multiplicative reasoning.

5) UPMAP (Understanding Participation rates in post-16 Mathematics and Physics) based at the Institute of Education, University of London.

   The UPMAP project is using a mixture of qualitative and quantitative methods to determine the range of factors (individual, school and out-of-school, including home), and their interactions, that influence post-16 participation in mathematics and physics in the UK and to assess their relative importance among different student populations.

   In Strand 1, items, including those from validated instruments, have been incorporated into questionnaires and distributed to schools across the country. To date, they have received approximately 23,000 student returns from 140 schools. In Strand 2 they are undertaking interviews on three occasions over two years with six of these students in each of twelve of the Strand 1 schools to explore their experiences and views of education, including mathematics and physics. In this Strand they are also collecting ethnographic data from the twelve schools. In Strand 3, they are undertaking interviews with a total of 50 students across four higher education institutes. Each of these students has the qualifications that would allow them to study a degree course in accountancy, mathematics, engineering or physics but only half of them are studying such courses. These interviews are revealing useful insights into factors that have influenced student choices.

ENCOUNTERS WITH EMPLOYERS AND THE WORKPLACE

EET: PROFOUND EMPLOYER ENGAGEMENT IN EDUCATION: WHAT IT IS AND OPTIONS FOR SCALING IT UP

Mann, A. and Virk, B. (2013). *Profound employer engagement in education: What it is and options for scaling it up. A report for the Board of Trustees of the Edge Foundation by Dr Anthony Mann and Baljinder Virk*. London: Education and Employers Taskforce.

The aim of the report is to provide a critical review of research and public policy literature concerned with the characteristics of engagement between employers and schools, focusing on school provision for the 11–18 age group. The engagement literature reviewed is mostly concerned with activities which support pupil progression through careers information and preparation for work.

The report begins by describing what profound employer engagement involves. For teaching and learning it argues that profound engagement involves employers being involved in supporting learning across all Key Stages and a wide range of subject areas, including curriculum design and review, project design and delivery, work-related learning resources, classroom presentations by employees, and business mentoring. For pupil progression, the report argues employers should be actively supporting provision across all Key Stages to enable effective career exploration, employability skill development and access to quality work experience that supports progression from school. Activities in this area should include work experience, job shadowing, managed part-time employment, workplace visits, careers activities and enterprise activities. Employers could also support school operation through active participation in governance and staff development. The report uses the example of University Technical Colleges (UTCs) and evidence from the first longitudinal evaluation of UTCs to highlight their close links with employers.[29] They also use the example from the US Career Academies programme, which is a form of 'school within a school' supporting high school students aged 15–18.[30] They offer a project-based style of learning rich in work-related learning and evaluation research has found that pupils at the academy earned 11% more once in work than their control group peers.[31]

They contrast the experience of profound engagement with evidence of what appears to be the norm in England where employer engagement is only concerned with pupil progression by introducing them to the world of work through work experience.[32] They demonstrate this is the norm by using evidence from a YouGov poll of 19–24-year-olds for the Education and Employers Taskforce in 2011, which showed that just 15% had engaged with employers on three or more occasions. They also point out that currently only UTCs, some high-performing independent schools and former specialist Business and Enterprise schools engage with employers in this way.[33]

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[29] Malpass, D., & Limmer, H (2013). *University Technical Colleges Students' Perceptions and Experiences of Studying Engineering*. Manchester: AQA Centre for Education Research and Policy.

[30] Kemple, J. with Willner, C. J. (2008). *Career Academies Long-term Impacts on Labour Market Outcomes, Educational Outcomes and Attainment and Transition to Adulthood*. New York: MDRC.
Edcoms (2007). *Business in Schools Research Findings*. London: Business in the Community.

[31] Kemple, J. with Willner, C. J. (2008). *Career Academies Long-term Impacts on Labour Market Outcomes, Educational Outcomes and Attainment and Transition to Adulthood*. New York: MDRC.

[32] Mann, A. & Percy, C (2013). Employer engagement in British secondary education: wage earning outcomes experienced by young adults. *Journal of Education and Work*.

[33] Huddleston, P., Mann, A., & Dawkins, J (2012). *Employer Engagement in English Independent Schools*. London: Education and Employers Taskforce.

Based on 15 UK and US different studies linked to 10 different programmes of employer engagement, they highlighted that the benefits include better labour market outcomes, attainment and attitudinal change in young people.[34]

The report presents evidence which suggests that young people who combine full-time education with part-time work at the age of 16/17 are more likely to be in some kind of work at the age of 18/19 than those who just studied full-time.[35] In addition, recent evidence of the labour market outcomes from young adults with higher levels of school-age employer contacts were, on average, up to 20% less likely to be NEET at the time of the survey and, if in full-time employment, to be earning 18% more than comparable peers who had less exposure while at school.[36] Teenagers with wide social networks with adults outside of school and family, including employers, were significantly more likely to do well in work as young adults than their comparable peers.[37]

The report found less evidence relating to employer engagement and pupil attainment and motivation. Research by AIR UK concluded that attainment was generally improved, but the extent of this was unclear.[38] The best evidence to date on the effect of business mentoring on GCSE attainment of randomly assigned borderline pupils, found that there was an average increase in attainment of 4%.[39]

The report also highlighted that there are a number of barriers for employers engaging with schools, based on survey evidence, which include employers believing it will be too difficult and bureaucratic to engage with schools, and that schools don't engage with employers which discourages them. In addition some employers don't understand the business case for engagement and are unaware of the benefits such as staff development and recruitment. The barriers for schools include a concern that it will be expensive, especially with the removal of the statutory requirement to offer work-related learning as part of the Key Stage four curriculum and the annulment of the ring-fenced budget for Education Business Partnership.

They conclude that there is willingness from both employers and schools to engage more with each other, but to overcome the barriers three things need to be put in place:

– Awareness that it is easy and free (or very low cost) to establish links between schools and employers;
– Business cases (on both sides) need to be sharp, support wider organisational objectives and widely understood;
– Schools should ask for help, rather than waiting for employers to volunteer.

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[34] Kemple, J. with Willner, C. J. (2008). *Career Academies Long-term Impacts on Labour Market Outcomes, Educational Outcomes and Attainment and Transition to Adulthood. New York:* MDRC.
Edcoms (2007). *Business in Schools Research Findings.* London: Business in the Community.
Mann, A. & Percy, C (2013). Employer engagement in British secondary education: wage earning outcomes experienced by young adults. *Journal of Education and Work.*
Percy, C. & Mann, A. (2014). School-mediated employer engagement and labour market outcomes for young adults: wage premia, NEET outcomes and career confidence. *Employer Engagement in Education: Theories and Practice.* Mann, A., Stanley, J. & Archer, L. (eds). London: Routledge. Miller, A (1998). *Business and Community Mentoring in Schools.* London: Department for Education and Employment. Athayde, R. (2012) The impact of enterprise education on attitudes to enterprise in young people: An evaluation study. *Education and Training,* 54: 709–726.

[35] Crawford, C., Duckworth, K., Vignoles, A. & Wyness, G. (2011). *Young Peoples Education and Labour Market Choices.* London: Department for Education.

[36] Mann, A. & Percy, C (2013). Employer engagement in British secondary education: wage earning outcomes experienced by young adults. *Journal of Education and Work.*
Percy, C. & Mann, A. (2014). School-mediated employer engagement and labour market outcomes for young adults: wage premia, NEET outcomes and career confidence. *Employer Engagement in Education: Theories and Practice.* Mann, A., Stanley, J. & Archer, L. (eds). London: Routledge.

[37] McDonald, S., Erickson, L. D., Johnson, M. K. & Elder, G. H (2007). Informal Mentoring and Young Adult Employment. *Social Science Research.* 36(7): 1328–1347.

[38] AIR UK (2008). *The Involvement of Business in Education. A Rapid Evidence Assessment of Measurable Impacts.* London: Department for Children Schools and Families.

[39] Miller, A. (1998). *Business and Community Mentoring in Schools.* London: Department for Education and Employment.

NFER: EVALUATION OF WORK EXPERIENCE PLACEMENT TRIALS FOR DFE

Sims, D., Southcott, C., Lynch, S. & Wade, P. (2013). *Evaluation of work experience placement trials.* London: Department for Education.

Following the Wolf Review, the DfE set up a series of trials in colleges of different models for implementing work experience for 16–19-year-olds. Colleges were allocated £80,000 in 2011/12 and £97,000 in 2012/13 for this purpose. At least 9,725 placements were provided during the two-year trial. The number provided across the colleges ranged from 40 to 1,742 (with an average of 389). 25 colleges participated.

As a result of participation in the trial, work experience was gaining a more strategic focus and a higher status in colleges. This was seen to have a positive impact on students, who developed employability skills including teamwork, communication and interpersonal skills.

The research found that most of the funding had been invested in a work experience coordinator which was the key to making work experience a more centrally managed and coordinated college-wide process. College senior managers highlighted the additional capacity work experience coordinators gave them to manage the cross-college procurement and organisation of work placements. Coordinators played four significant roles: they managed the contact with employers to secure placements; they worked with heads of departments and programme teams to help integrate work experience within the curriculum; they coordinated the preparation of students for going on placements; and they visited students on placement.

Employers who participated would all do so again. Some initial obstacles were based around uncertainty regarding Disclosure and Barring Service (DBS) checks (formerly carried out by the Criminal Records Bureau – CRB) and perceptions of burdensome paperwork.

APPENDIX 4: CONTRIBUTORS AND CONSULTEES

GATSBY

INTRODUCTION

During the research process several consultation events were held to help inform and direct the process, interpret the key findings and feed in to the main report's recommendations. The first consultation event was held in October 2013 shortly after all the independent school visits, the international case studies, and the first draft of the key literature sources were complete. This event helped to shape the nature and definition of the benchmarks, which in turn informed the survey process.

The second series of consultations occurred once the survey was complete and alongside the creation and articulation of the report's main findings and recommendations. These were small group consultations of headteachers, employers and careers specialists. A final consultation event was an evening event hosted by Lord Sainsbury of Turville and Sir William Castell. The many different perspectives and pieces of information which were shared at the consultation events were extremely valuable to the research process.

The contribution of all those people listed below is gratefully acknowledged, as is the contribution of those who participated in the many formal and informal conversations with the research team who are not listed below. In particular, this Appendix excludes the names of the many people we consulted during our international visits and visits to English independent schools. Those contributors are listed in Appendices 1 and 2 and their help and support to the research process is gratefully acknowledged.

We are also grateful to the government officials and MPs whose ready cooperation helped us to locate the report within the policy context.

Interpretation and presentation of the findings and recommendations, however, remains the responsibility of the authors of the report.

REVIEWERS

Peter Finegold	Institution of Mechanical Engineers	Anthony Tomei	Visiting Professor at King's College London
Hilary Leevers	The Wellcome Trust		

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John Coyne	University of Derby	Brian Lightman	Association of School and College Leaders
Ian Duffy	BP	Anthony Mann	Education and Employers Taskforce
Diana Garnham	Science Council	Jeremy Palmer	Career Academies
Deirdre Hughes	National Careers Council	Anne Spackman	Career Academies

CONSULTATION ON THE BENCHMARKS
22nd October 2013

David Andrews	Fellow, National Institute for Career Education and Counselling
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Judith Ball	Davenant Foundation School
Fay Best	Women Into Science and Engineering (WISE) Campaign
Jenny Bimrose	Institute for Employment Research, University of Warwick
Kirsten Bodley	STEMNET
Grace Breen	Confederation of British Industry
Nicola Brown	TeachFirst
Jenifer Burden	The Gatsby Charitable Foundation
Peter Clark	Department for Education
Mervin Dadd	Cogent Sector Skills Council
Karleen Dowden	The Association of School and College Leaders
Ian Duffy	BP
James Epps	The Gatsby Charitable Foundation
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POST-SURVEY EDUCATION STAKEHOLDER CONSULTATION
27th January 2014

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Patrice Canavan	Oaklands School, London
Russell Hobby	National Association of Headteachers
Kathy Mountford	Heanor Gate Science College, Derbyshire
Dawn Nicholls	Southend High School for Girls
Moazam Parvez	Buxton School, Leytonstone
Anthony Tomei	Visiting Professor at King's College London
Malcolm Trobe	Association of School and College Leaders
Josephine Valentine	St Clement Danes Secondary School

POST-SURVEY EMPLOYERS STAKEHOLDER CONSULTATION
3rd February, 2014

Grace Breen	Confederation of British Industry
Peter Finegold	Institution of Mechanical Engineers
Sara Higham	Federation of Small Businesses
Sarah Jones	Association of the British Pharmaceutical Industry
Verity O'Keefe	EEF, the manufacturers' organisation
Tony Moloney	National Grid UK
Ralph Saelzer	Liebherr Cranes
Nicola Swaney	Rolls-Royce
David Thorpe	Science Learning Centres

POST-SURVEY CAREERS SECTOR CONSULTATION WORKSHOP

3rd February 2014

Louise Archer	King's College London
Martin Blincow	Skills and Employability Service, Kent County Council
Paul Chubb	Careers England
Virginia Isaac	Inspiring Futures
Peter Main	Institute of Physics
Claire Nix	Career Development Institute
Tessa Stone	Brightside
Anthony Tomei	Visiting Professor at King's College London

STRATEGIC STAKEHOLDERS CONSULTATION EVENING

25th March 2014

Lord Sainsbury of Turville	Settlor, The Gatsby Charitable Foundation
Sir William Castell	Chairman, The Wellcome Trust
Sir Keith Burnett	Vice-Chancellor, University of Sheffield
Neil Carberry	Director of Employment and Skills, Confederation of British Industry
David Cruickshank	Chairman, Deloitte
Elizabeth Eddy	Head of Skills in Employment, NHS
Steve Edwards	Founder, bestCourse4me
Jayne Haines	Global Vice President of Learning, GlaxoSmithKline
Deirdre Hughes	Chair, National Careers Council
Hilary Leevers	Head of Education and Learning, The Wellcome Trust
Brian Lightman	General Secretary, The Association of School and College Leaders
Frank McLoughlin	Principal, City and Islington College
Sir John Parker	President, Royal Academy of Engineering
David Pollard	Chairman, Policy Group on Education, Skills and Business Support, Federation of Small Businesses
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Tony Watts	Visiting Professor of Career Development, University of Derby

CONTRIBUTORS

Sir John Holman is Professor in the Chemistry Department, University of York, UK and adviser in Education at the Wellcome Trust and the Gatsby Charitable Foundation. He was Director of the National Science Learning Centre from 2004 until September 2010, and adviser to the English government as National Science, Technology, Engineering and Mathematics (STEM) Director from 2006 until September 2010. John has taught learners of science at all levels from 11-year-olds to undergraduates. He has created curricula and written books for science learners of most ages in the UK and overseas, and was author of the 2010 'STEM Careers Review' for Gatsby.

After studying Natural Sciences at Cambridge, John taught in a range of secondary schools and in 1994 he became headteacher of Watford Grammar School for Boys. From 2000 to 2004 he was Salters Professor of Chemical Education at the University of York. John was knighted by The Queen in the 2010 New Year's Honours List, for services to education.

Professor Tony Watts OBE is a Founding Fellow and Life President of the National Institute for Careers Education and Counselling, and Visiting Professor at the University of Derby and at Canterbury Christ Church University. He has written many books and articles, has lectured in over 60 countries, and has carried out a number of comparative studies of career guidance systems around the world. He has also been a consultant to the European Commission, OECD, UNESCO and the World Bank.

Jo Hutchinson is Principal Researcher Fellow at the International Centre for Guidance Studies, University of Derby. Jo is a professional social science researcher who has managed numerous research, evaluation, strategy development and consultation projects throughout her career. She has undertaken research in the areas of economic and community development, youth transitions and career. Her research interests include socially excluded or NEET young people, factors affecting choices and experiences of transition, STEM career awareness and equality and diversity perspectives.

Dr Tristram Hooley is Reader in Career Development at the University of Derby and Head of the International Centre for Guidance Studies. He is a member of the UK Careers Sector Strategic Alliance, a Winston Churchill Fellow, a Fellow of the National Institute for Career Education and Counselling (NICEC) and serves on the editorial board of the *British Journal of Guidance and Counselling.* He also writes the Adventures in Career Development blog at: http://adventuresincareerdevelopment.wordpress.com. He has published extensively on careers work in the UK and abroad. His current research interests include the intersection between careers policy and practice, the role of digital technologies in careers work and how appearance and attractiveness influence career development.

APPENDIX 5:
THE SCHOOL SURVEY

GATSBY

SURVEY METHOD

The survey of secondary schools in England was undertaken via a self-completion online questionnaire conducted by a specialist survey company JRA Ltd. A schedule of questions was created by the research team and scripted using survey software. The survey instrument was then placed on the company server using the NEBU software platform. An initial soft launch was used as a pilot process which was completed by 42 respondents. One question was changed following this pilot prior to full launch of the survey. Invitations to take part in the survey were sent out to senior contacts in schools sourced through reputable suppliers of education online databases. The survey was conducted between 7th November and 12th December 2014, with an average duration of ten minutes. Within the survey invitation introduction, an explanation was given that the project was designed to understand career guidance and provision in schools in England and was being funded by Lord Sainsbury's Gatsby Charitable Foundation.

Returns were provided by 361 respondents. All respondents completing the survey held senior positions within their school and were either members of their School Leadership Team or involved in the provision of careers information/guidance.

Quotas were set on the overall sample structure to ensure that a broadly representative sample of secondary schools throughout England was achieved. Schools taking part in the survey were spread across all regions of the country and included a range of different types. In the final data the sample structure for type of school was weighted to be in line with the total state secondary school population in England. Weighting factors applied to the final data were relatively low, with a good representation of the school universe having been achieved in the raw survey sample. The breakdown by type of school is shown below:

Table 1: Survey response

	Survey sample breakdown (361)	Weighted final data (361)
State-funded LA-maintained schools	39%	44%
State-funded Academies	54%	41%
State-funded others	7%	15%
Have Sixth Form	55%	51%
Do not have Sixth Form	45%	49%

Some response bias might be expected in the results, because of the likely tendency for respondents with a strong interest in career guidance to respond to the survey. Such schools might also have volunteered to achieve a quality mark in career guidance. The survey found that 27% of the schools reported that they did have a quality mark for their career guidance provision. Careers England states that 1,100 of the 3,500 state secondary schools in England either hold or are working towards a quality mark.[1] So this suggests that (on this question at least) the survey response is not significantly biased towards schools that are prioritising their career guidance provision.

[1] www.careersengland.org.uk/quality.php?page=introduction

SURVEY RESPONDENTS

Table 2: Profile of respondents

Total		363	%
Position in school[A]	Headteacher	49	13%
	Deputy headteacher	65	18%
	Assistant headteacher	129	36%
	Head of Sixth Form or Head of year	35	10%
	Head of department	68	19%
	Other	15	5%
Type of school	State-funded LA-maintained school	159	44%
	State-funded academy	148	41%
	Other type[B]	48	15%
Region	North	110	30%
	Midlands	72	20%
	East of England	43	12%
	London/ South East	91	25%
	South West	45	12%
Age of students	11– 16 (Years 7– 11)	177	49%
	11– 18 (Years 7– 13/Sixth Form)	184	51%
Quality Mark for career guidance	Yes	100	28%
	No	212	59%
	Not sure	50	14%
% Eligible for free school meals	15% or more	106	29%
Ofsted grading	Grade 1: Outstanding	71	20%
	Grade 2: Good	194	54%
	Grade 3: Requires improvement	78	22%
	Grade 4: Inadequate	9	2%
	Don't know	9	2%

[A] 87% were members of Senior Leadership Team, and those that were not stated that they were involved in career provision at their school.
[B] 'Other type' responses included: 'University Technical College', 'Pupil referral Unit' and 'Other'.

PROFILE OF CAREER GUIDANCE WITHIN SCHOOLS

The statutory duty

Before making the comparisons with benchmarks, we asked some general questions to see how career guidance was regarded in the school. Most survey respondents (85%) were aware of their statutory duty to secure access to independent and impartial career guidance, whilst 84% said they did secure such access.

Most school leaders judged their careers programme to be either very or quite important to their school culture and ethos (Table 3); and most did not want to lose any of their current provision, but rather wanted to increase and extend it (Table 4). When asked which of the activities offered were most important, the most frequent responses related to provision of one-to-one career guidance interviews, work experiences, careers fairs and careers education within PSHE (Table 5). From the survey evidence, schools see the importance of providing career guidance for their students and recognise the value of providing a range of different experiences.

Table 3: Importance of careers work to the school culture

Q: In your judgement, in terms of your overall school culture and ethos, how important is the careers programme for your students?	%
Very important	53
Quite important	36
Neither / nor	9
Not very important	2
Not at all important	0

Table 4: Activities to cease or increase

Q: Is there any form of career provision that you would like to cease?	%
Nothing	88
Work experience	4
Other	3
Q: Are there any specific careers activities that you would like to increase?	**%**
Work experience	23
Nothing	18
Employer engagement	17
Career advisers one-to-one	13
Interview technique practice	5
Guest speakers	5
Partnerships with universities	4

Table 5: The most important careers activities (the top eight)

Q: Can you describe the most important careers activities that your students experience whilst they are at your school? (Most frequently provided responses)?	%
Access to career advisers	43
Work experience or work placements	30
Careers fairs/conventions	27
Careers lessons in PSHE	22
Practice interviews	16
Careers day	15
External speakers who are employers	10
External speakers (generally)	10

Table 6: The most frequently cited challenges

Q: What challenges does your school experience in providing your students with meaningful career learning?	%
Costs and money issues	30
Finding the time	17
Access to appropriate placements	16
Lack of time within the curriculum	14
Lack of contacts and connections	9
Pupils' lack of interest or engagement	9
Pupils' low aspirations	5
Inexperienced or untrained staff	5
Cuts to Connexions services	5
Up-to-date resources and information	4
None	4

COMPARISON WITH THE BENCHMARKS

The survey was designed to find out more than school attitudes to career guidance, their provision compared with previous years or whether they met the statutory minimum. Rather it was also designed to find out what proportion of schools achieved each benchmark and how many schools achieved all or some of them.

The benchmarks include several components. For example, the first one states that every school should have a structured careers programme that has the explicit backing of the senior management team, and an identified and appropriately-trained person of authority responsible for it. There are therefore three elements that a school has to achieve before it can be said to meet the benchmark: the survey asked questions about each of these elements. The full results to each of the questions are presented in Tables 13 to 43 in this report. The results in Table 7 outline how many schools fulfilled all of the elements within each benchmark.

Note that some of the indicator statements in Table 7 are worded differently from those in the benchmarks in Section 3 of the main report. This is because the school survey used an earlier version of the benchmarks.

Table 7: Proportion of schools that achieve each component within each benchmark

1 A stable careers programme	% of schools that meet each element within the benchmark
Every school should have a structured careers programme that has the explicit backing of the senior management team, and has an identified and appropriately-trained person of authority responsible for it.[C]	71%
The careers programme should be published on the school's website in a way that enables students, parents, teachers and employers to understand the school's offer in this area.	19%
The programme should be regularly evaluated with feedback from students, parents, teachers and employers as part of the evaluation process.[D]	66%
2 Learning from career and labour market information	
By the age of 14, all students[E] should have accessed and used information about career paths and the labour market to inform their own decisions on study options.	20%
Parents and carers should be encouraged to access and use information about labour markets and future study options to inform their support to their children.	72%
3 Addressing the needs of each student	
A school's careers programme should actively seek to challenge stereotypical thinking and raise aspirations.	73% (stereotypes) 88% (aspirations)
Schools should keep systematic records of the individual advice given to each student, and subsequent agreed decisions.	56%
All students should have access to these records to support their career development.	42%[F]
Schools should collect and maintain accurate data for each pupil on their education, training or employment destinations after they leave school.[G]	79%
4 Linking curriculum learning to careers	
By the age of 14, every student should have had the opportunity to learn how the different STEM subjects help people to gain entry to, and be more effective workers within, a wide range of careers.	20%
5 Encounters with employers	
Every year, from the age of 11, students should participate in at least one meaningful encounter with an employer.	39%
6 Experiences of workplaces	
By the age of 16, every student should have had at least one experience of a workplace, additional to any part-time jobs they may have.	46%
By the age of 18, every student should have had one further such experience, additional to any part-time jobs they may have.	30%[H]
7 Encounters with further and higher education	
By the age of 16, every student should have had a meaningful encounter with providers of the full range of learning opportunities, including Sixth Forms, colleges, and apprenticeship providers.[I] This should include the opportunity to meet both staff and students.	23%
By the age of 18, all students who are considering applying for university should have had at least two visits to universities to meet staff and students.	21%[J]
8 Personal guidance	
Every student should have at least one such interview by the age of 16, and the opportunity for a further interview by the age of 18.	44% (age 16) 22% (age 18)

[C] 88% of schools allocate an individual with responsibility for careers while 44% of these individuals are members of SLT
[D] 66% of schools said they regularly evaluated their provision. Schools that regularly evaluated their provision with feedback from different groups is as follows: students (73%), teachers (54%), parents (39%) and employers (39%). 21% of schools sought feedback from all four groups.
[E] Where schools indicated that between 91% and 100% of pupils participated in an event this is used to infer that 'all' pupils participate.
[F] Pupils have access in 72% of the 202 schools that keep records. This represents 42% of the overall sample.
[G] Destination data is collected for Year 13 leavers by 84% of all schools with Sixth Forms.
[H] 30% of those schools with students in Years 12 and 13 (n=184) provided a positive response to this question.
[I] 53% of schools provide encounters with Sixth Form, 45% of schools have an encounter with a college, while 21% of schools have an encounter with apprenticeship providers. 23% of schools said their pupils had encounters with all three.
[J] 30% of schools with Sixth Forms (n=184) provided a positive response to this question.

Levels of awareness among senior school leaders about careers provision

A significant minority of respondents stated that they did not know the answer to some questions (see Table 9). This is not surprising and reflects the findings of previous research.[2] However, it is unsatisfactory and suggests that some senior school leaders are not giving close attention to the detail of their career guidance provision.

Table 8: Proportion of schools that achieve all components of each benchmark

1 A stable careers programme	% of schools that meet each element within the benchmark
Every school should have a structured careers programme that has the explicit backing of the senior management team, and has an identified and appropriately-trained person of authority responsible for it. The careers programme should be published on the school's website in a way that enables students, parents, teachers and employers to understand the school's offer in this area. The programme should be regularly evaluated with feedback from students, parents, teachers and employers as part of the evaluation process.	4%
2 Learning from career and labour market information	
By the age of 14, all students should have accessed and used information about career paths and the labour market to inform their own decisions on study options. Parents and carers should be encouraged to access and use information about labour markets and future study options to inform their support to their children.	18%
3 Addressing the needs of each student	
A school's careers programme should actively seek to challenge stereotypical thinking and raise aspirations. Schools should keep systematic records of the individual advice given to each student, and subsequent agreed decisions. All students should have access to these records to support their career development. Schools should collect and maintain accurate data for each pupil on their education, training or employment destinations after they leave school.	30%
4 Linking curriculum learning to careers	
By the age of 14, every student should have had the opportunity to learn how the different STEM subjects help people to gain entry to, and be more effective workers within, a wide range of careers.	20%
5 Encounters with employers	
Every year, from the age of 11, students should participate in at least one meaningful encounter with an employer.	39%
6 Experiences of workplaces	
By the age of 16, every student should have had at least one experience of a workplace, additional to any part-time jobs they may have. By the age of 18, every student should have had one further such experience, additional to any part-time jobs they may have.	11%
7 Encounters with further and higher education	
By the age of 16, every student should have had a meaningful encounter with providers of the full range of learning opportunities, including Sixth Forms, colleges, and apprenticeship providers. This should include the opportunity to meet both staff and students. By the age of 18, all students who are considering applying for university should have had at least two visits to universities to meet staff and students.	1%
8 Personal guidance	
Every student should have at least one such interview by the age of 16, and the opportunity for a further interview by the age of 18.	10%

[2] Hutchinson, J. (2013). *School organisation and STEM career-related learning.* York: National STEM Centre.

Table 9: Proportion of respondents that said they did not know whether their school achieved the benchmark element.

1 A stable careers programme	Don't knows
Every school should have a structured careers programme that has the explicit backing of the senior management team, and has an identified and appropriately-trained person of authority responsible for it.	12%
The careers programme should be published on the school's website in a way that enables students, parents, teachers and employers to understand the school's offer in this area.	14%
The programme should be regularly evaluated with feedback from students, parents, teachers and employers as part of the evaluation process.[K]	16%
2 Learning from career and labour market information	
By the age of 14, all students should have accessed and used information about career paths and the labour market to inform their own decisions on study options.	33%
Parents and carers should be encouraged to access and use information about labour markets and future study options to inform their support to their children.	12%
3 Addressing the needs of each student	
A school's careers programme should actively seek to challenge stereotypical thinking and raise aspirations.	n/a
Schools should keep systematic records of the individual advice given to each student, and subsequent agreed decisions.	19%
All students should have access to these records to support their career development.	26%
Schools should collect and maintain accurate data for each pupil on their education, training or employment destinations after they leave school.	7%
4 Linking curriculum learning to careers	
By the age of 14, every student should have had the opportunity to learn how the different STEM subjects help people to gain entry to, and be more effective workers within, a wide range of careers.	42%
5 Encounters with employers	
Every year, from the age of 11, students should participate in at least one meaningful encounter with an employer.	22%
6 Experiences of workplaces	
By the age of 16, every student should have had at least one experience of a workplace, additional to any part-time jobs they may have.	13%
By the age of 18, every student should have had one further such experience, additional to any part-time jobs they may have.	29%[L]
7 Encounters with further and higher education	
By the age of 16, every student should have had a meaningful encounter with providers of the full range of learning opportunities, including Sixth Forms, colleges, and apprenticeship providers. This should include the opportunity to meet both staff and students.	21% (employers) 25% (colleges) 38% (apprentice providers)
By the age of 18, all students who are considering applying for university should have had at least two visits to universities to meet staff and students.	33%[L]
8 Personal guidance	
Every student should have at least one such interview by the age of 16, and the opportunity for a further interview by the age of 18.	21% (age 16) 41%[L] (age 18)

[K] 13% of respondents did not know about feedback from students. The proportions for parents were 20%; teachers, 15%; and employers, 22%.
[L] These figures are percentages of those 184 schools with students of this age.

PROPORTION OF SCHOOLS THAT ACHIEVE SOME OR ALL OF THE BENCHMARKS

The benchmarks each comprise a number of components and conditions. Benchmark 1 for example has three components, each of which contain a further set of conditions which were assessed by asking six separate questions. The following table provides an analysis of schools which met all elements of at least one of the benchmarks. It shows that 69% of schools achieved at least one benchmark and 39% achieved at least two. Only 2% of schools achieved five benchmarks, and no schools achieved six or more of the eight benchmarks.

Table 10: Proportion of schools achieving some or all benchmarks

Proportion of schools achieving some or all benchmarks	%
% of schools that achieve at least 1 benchmark	69%
% of schools that achieve at least 2 benchmarks	39%
% of schools that achieve at least 3 benchmarks	18%
% of schools that achieve at least 4 benchmarks	6%
% of schools that achieve at least 5 benchmarks	2%
% of schools that achieve at least 6 benchmarks	0%
% of schools that achieve at least 7 benchmarks	0%
% of schools that achieve all 8 benchmarks	0%

Table 11: Proportion of schools achieving some or all of the relaxed benchmarks

Proportion of schools achieving some or all of the relaxed benchmarks	%
% of schools that achieve at least 1 benchmark	88%
% of schools that achieve at least 2 benchmarks	72%
% of schools that achieve at least 3 benchmarks	50%
% of schools that achieve at least 4 benchmarks	31%
% of schools that achieve at least 5 benchmarks	13%
% of schools that achieve at least 6 benchmarks	5%
% of schools that achieve at least 7 benchmarks	2%
% of schools that achieve all 8 benchmarks	1%

The benchmarks represent a high standard, but was the standard so high that it was unrealistic for schools to even attempt to achieve them? Or would schools have to simply adapt and extend their current practice to achieve more, or even all of the benchmarks? To test this we undertook analysis of the data to see whether schools achieved a set of 'relaxed benchmarks'. These lowered the threshold for benchmark achievement so that for instance, where the benchmark says 'all pupils' this is relaxed to '51% or more pupils' (see Table 12).

By relaxing the thresholds we found that many more schools achieved the benchmarks. 88% achieved at least one of the 'relaxed' benchmarks, 50% achieved three, 13% achieved five and 1% of schools achieved all eight. This is not to argue for relaxing the benchmarks, but rather to demonstrate that many schools already deliver a lot of good career guidance activity and that, with some adaptation and extension, reaching all eight benchmarks is realistic.

Table 12: Criteria for the 'relaxed' benchmark

1 A stable careers programme
Every school should have a structured careers programme that has the explicit backing of the senior management team, and has an identified and appropriately-trained person of authority responsible for it.
The programme should be regularly evaluated with feedback from either students, parents, teachers and employers as part of the evaluation process.
2 Learning from career and labour market information
By the age of 14, at least 50% of students should have accessed and used information about career paths and the labour market to inform their own decisions on study options.
Parents and carers should be encouraged to access and use information about labour markets and future study options to inform their support to their children.
3 Addressing the needs of each student
A school's careers programme should actively seek to challenge stereotypical thinking and raise aspirations.
Schools should keep systematic records of the individual advice given to each student, and subsequent agreed decisions.
Schools should collect and maintain accurate data for each pupil on their education, training or employment destinations after they leave school.
4 Linking curriculum learning to careers
By the age of 14, at least 50% of students should have had the opportunity to learn how the different STEM subjects help people to gain entry to, and be more effective workers within, a wide range of careers.
5 Encounters with employers
Every year, from the age of 11, at least 50% of students should participate in at least one meaningful encounter with an employer.
6 Experiences of workplaces
By the age of 16, at least 50% of students should have had at least one experience of a workplace, additional to any part-time jobs they may have.
By the age of 18, at least 50% of students should have had one further such experience, additional to any part-time jobs they may have.
7 Encounters with further and higher education
By the age of 16, at least 50% of students should have had a meaningful encounter with providers of at least two learning opportunities, including Sixth Forms, colleges, and apprenticeship providers. This should include the opportunity to meet both staff and students.
By the age of 18, at least 50% of students who are considering applying for university should have had at least two visits to universities to meet staff and students.
8 Personal guidance
At least 50% of students should have at least one such interview by the age of 16, and the opportunity for a further interview by the age of 18.

WHICH SCHOOLS DO WHAT – STATISTICALLY SIGNIFICANT DIFFERENCES

The results of the data were systematically tested for statistical significance at a 95% level of confidence. These tests were conducted within each category to see whether particular types and characteristics of schools were associated with particular elements of career guidance provision.

The most frequently observed statistically significant relationships were found to be associated with schools with an outstanding grading by Ofsted and schools with a careers quality mark. It should be noted that these are associations, meaning that the results would not be expected to occur by chance. However just because there is an association between two factors does not necessarily mean that there is a causal relationship: for example, outstanding schools may be associated with the provision of one-to-one guidance to all pupils, but this does not mean that because a school is outstanding they offer this service, and neither does it mean that their offer of this service makes it outstanding.

There was only one statistically significant difference in provision of career guidance between state-funded local authority-maintained schools and state-funded academies and that was that academies were less likely to provide all pupils with a meaningful encounter with a college.

In the analysis below it is worth noting that 38% of schools with a quality mark are graded as outstanding, so there is an overlap between these two characteristics.

Schools graded by Ofsted as outstanding are significantly more likely that those graded as requiring improvement to:

– Publish their careers plan on their school website;
– Have a careers programme that actively seeks to challenge stereotypical thinking;
– Encourage parents and carers to access and use information about labour market and future study.

Schools graded by Ofsted as outstanding are significantly more likely that those graded as either good or requiring improvement to:

– Have a structured careers programme that is written down;
– Evaluate the effectiveness of their careers plan every three years;
– Secure systematic feedback from students, parents and employers every three years;
– Have a particular individual allocated responsibility for careers work and advice;
– Keep systematic records of individual advice;
– Say that all pupils have had at least one direct experience of a workplace;
– Rate the importance of the careers programme as being 'very important' for students.

Schools without Sixth Forms are significantly more likely than those with a Sixth Form to:

– Have an individual responsible for careers who is also part of the school senior leadership team;
– Have a careers programme that actively seeks to challenge stereotypical thinking;
– State that all pupils have had a meaningful encounter with a school Sixth Form and a college, and also with an apprenticeship provider.

Schools which have a quality mark for career guidance are significantly more likely than those without to:

– Be aware of the duty to secure access to independent and impartial career guidance;
– Have secured access to independent and impartial career guidance;
– Have a structured careers programme that is written down;
– Publish their careers plan on their school website;
– Evaluate the effectiveness of their careers plan every three years;
– Secure systematic feedback from students, parents, employers and teachers every three years;
– Have an individual responsible for careers who is also part of the school senior leadership team;
– Encourage parents and carers to access and use information about labour market and future study;
– Rate the importance of the careers programme as being 'very important' for students.

RESPONSES TO SURVEY QUESTIONS BY SCHOOL TYPE

Table 13: Awareness of statutory duty

Q: Section 29 of the Education Act 2011 placed schools under a duty to secure access to independent and impartial careers guidance for their pupils in school Years 9–11. From September 2013 this was extended to Year 8–13. Were you aware of this duty?

	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Yes	85%	86%	87%	75%	92%	83%	88%	89%	97%	82%	72%	89%
No	8%	8%	7%	8%	5%	8%	7%	11%	1%	10%	13%	8%
Not sure	8%	6%	6%	17%	4%	9%	5%	–	3%	8%	15%	4%
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 14: School achievement of statutory duty

Q: In your opinion does your school secure access to independent and impartial career guidance for its pupils in schools Years 8– 13?

	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Yes	85%	88%	84%	70%	91%	85%	83%	89%	95%	79%	83%	89%
No	11%	9%	11%	13%	7%	9%	15%	11%	5%	15%	–	11%
Not sure	7%	3%	4%	17%	2%	6%	2%	–	–	6%	17%	–
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 15: School assessment of most important element of their careers provision (PART 1)

Q: Can you describe the most important careers activities that your students experience whilst they are at your school?												
	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Careers advisers/ one-to-one advice		45%	49%	27%	43%	45%	43%	51%	36%	48%	42%	46%
Work experience/ placement		31%	31%	27%	29%	30%	35%	34%	34%	30%	23%	32%
Careers fairs/ conventions/conferences		24%	33%	20%	34%	21%	34%	56%	21%	30%	26%	22%
Careers lessons e.g. in PSHE		23%	26%	10%	23%	22%	24%	11%	21%	24%	20%	29%
Mock/practice interviews		18%	18%	8%	12%	20%	16%	–	18%	16%	17%	22%
Other		20%	14%	15%	12%	16%	22%	11%	15%	18%	14%	18%
Careers day		10%	22%	8%	15%	14%	17%	18%	15%	15%	15%	15%
External speakers – employers, industry		9%	13%	12%	15%	11%	9%	11%	15%	9%	9%	7%
Unspecific mentions of external speakers		13%	10%	–	9%	9%	14%	11%	9%	10%	9%	13%
Year 11 options/help with A-level choices/ A-level tasters		7%	5%	13%	10%	5%	13%	–	13%	6%	4%	6%
External speakers – colleges, universities		7%	7%	5%	4%	5%	15%	–	11%	5%	8%	3%
Careers websites/online questionnaires		7%	8%	3%	10%	6%	5%	8%	8%	7%	3%	1%
Connexions		7%	5%	8%	3%	7%	6%	23%	7%	7%	4%	3%
University trips		5%	10%	–	9%	5%	8%	19%	3%	8%	7%	6%
GCSE/Year 9 options		9%	5%	–	3%	6%	8%	–	6%	7%	2%	7%
Work experience in Year 10		8%	5%	–	6%	5%	9%	–	4%	5%	13%	4%
College trips		5%	8%	–	11%	4%	6%	–	4%	7%	3%	7%
CV writing lessons		4%	8%	3%	3%	6%	7%	11%	7%	5%	6%	6%
Tutor monitoring/ advice/discussions		3%	7%	5%	3%	5%	7%	–	5%	6%	–	5%
Workshops e.g. Business skills		4%	4%	3%	1%	4%	4%	–	4%	4%	5%	4%
Support with application writing/processes		4%	4%	–	2%	5%	1%	11%	2%	4%	3%	4%
Meeting professionals/ employers e.g. Speed Dating		5%	2%	3%	6%	3%	3%	–	3%	4%	–	2%
Young enterprise/ enterprise activities		4%	3%	–	4%	3%	5%	–	4%	2%	4%	4%
Organisation/ business trips		5%	2%	–	4%	3%	2%	–	2%	4%	–	3%
Work experience in Year 12/13/Sixth Form		2%	4%	3%	8%	2%	2%	–	1%	3%	5%	4%

Table 15: School assessment of most important element of their careers provision (PART 2)

Q: Can you describe the most important careers activities that your students experience whilst they are at your school												
	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Apprenticeship roadshow/ events/sessions	3%	4%	–	1%	3%	4%	–	3%	3%	3%	2%	2%
No/none/nothing	1%	1%	12%	–	3%	–	–	2%	2%	2%	7%	–
Careers/FE/ HE research	1%	4%	3%	3%	2%	4%	–	4%	4%	2%	3%	3%
Mentoring	2%	4%	–	2%	3%	1%	8%	2%	2%	3%	1%	3%
Trips/visits (gen.)	3%	2%	–	1%	3%	2%	–	4%	4%	1%	4%	4%
Work experience in Year 11	2%	2%	3%	5%	1%	2%	–	1%	1%	3%	1%	2%
Taster day – non-specific	1%	1%	8%	1%	4%	–	–	5%	5%	1%	–	3%
Links/partnerships with local firms	1%	2%	3%	2%	2%	2%	–	3%	3%	2%	–	3%
Careers week/fortnight	5%	–	–	1%	3%	1%	–	1%	1%	3%	–	3%
IAG/Support/ Guidance (gen.)	1%	2%	5%	–	3%	3%	–	4%	4%	1%	–	4%
Careers library	1%	4%	–	3%	2%	–	–	3%	3%	2%	1%	1%
Enrichment activities/events	1%	3%	–	4%	2%	1%	–	1%	1%	2%	3%	1%
Options guidance (gen.)	3%	1%	–	–	2%	4%	–	1%	1%	2%	2%	–
UCAS advice/ support	1%	3%	–	3%	2%	–	–	2%	2%	2%	2%	1%
Parents evenings/ meetings/events	2%	2%	–	1%	1%	4%	–	2%	2%	2%	–	1%
Additional support for those at risk of being NEET	1%	3%	–	3%	1%	2%	–	4%	4%	1%	–	3%
Assemblies – non-specific	2%	2%	–	–	1%	5%	–	–	–	2%	3%	3%
Community service/ volunteering	1%	2%	–	–	2%	3%	–	1%	1%	2%	2%	2%
Work/job shadowing	1%	2%	–	4%	0%	1%	–	2%	2%	1%	3%	1%
Taster day – industry	1%	2%	–	2%	1%	2%	–	3%	3%	1%	–	–
STEM activities	2%	1%	–	–	1%	3%	–	–	–	2%	–	1%
Internship	1%	–	3%	4%	–	–	–	3%	3%	–	–	2%
Drop-in sessions	1%	1%	–	2%	1%	–	–	1%	1%	1%	–	2%
Prep for work qualification/course/ package	–	2%	–	1%	1%	–	–	1%	1%	1%	–	–
Not stated	–	1%	–	1%	–	–	–	2%	2%	–	–	–
Work experience linked to courses	1%	–	–	1%	–	–	–	1%	1%	–	–	1%

Table 16: Schools with structured careers programmes

Q: Does your school have a structured careers programme that is written down?												
	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Yes	69%	75%	72%	53%	85%	71%	65%	48%	85%	67%	58%	78%
No	17%	15%	14%	28%	10%	16%	22%	27%	11%	21%	9%	15%
Not sure	14%	10%	13%	18%	5%	13%	13%	26%	4%	12%	33%	7%
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 17: Publication of careers programme on school website

Q: Does your school have a careers programme that is published on the school's website?												
	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Yes	20%	13%	21%	28%	22%	21%	10%	–	35%	11%	18%	21%
No	63%	70%	65%	48%	65%	63%	67%	89%	55%	77%	31%	61%
Not sure	19%	17%	14%	23%	12%	16%	23%	11%	10%	12%	51%	19%
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 18: Evaluation of the school careers programme

Q: Does your school leadership team evaluate the effectiveness of the school's careers programme at least every three years?												
	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Yes	64%	62%	68%	68%	78%	65%	64%	33%	83%	60%	56%	72%
No	18%	19%	22%	7%	16%	18%	19%	40%	12%	23%	10%	10%
Not sure	18%	19%	10%	25%	6%	17%	17%	26%	5%	17%	34%	18%
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 19: Feedback from students

Q: As part of this process, do you seek systematic feedback on your careers programme from students?												
	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Yes	73%	73%	76%	75%	91%	71%	75%	37%	87%	70%	66%	79%
No	12%	15%	14%	5%	7%	14%	15%	26%	10%	17%	1%	9%
Not sure	15%	13%	10%	20%	3%	15%	10%	37%	3%	13%	32%	11%
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 20: Feedback from teachers

Q: As part of this process, do you seek systematic feedback on your careers programme from teachers?												
	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Yes	54%	54%	54%	63%	62%	56%	54%	18%	74%	48%	51%	61%
No	30%	30%	35%	15%	29%	28%	34%	56%	22%	36%	18%	24%
Not sure	16%	16%	11%	22%	9%	16%	11%	26%	4%	16%	31%	14%
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 21: Feedback from parents

Q: As part of this process, do you seek systematic feedback on your careers programme from parents?												
	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Yes	43%	35%	36%	58%	64%	34%	35%	–	54%	33%	37%	41%
No	39%	43%	45%	20%	27%	42%	50%	63%	34%	51%	11%	39%
Not sure	22%	22%	18%	22%	8%	25%	15%	37%	12%	16%	52%	20%
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 22: Feedback from employers

Q: As part of this process, do you seek systematic feedback on your careers programme from employers?												
	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Yes	40%	42%	34%	50%	52%	38%	39%	8%	51%	33%	47%	44%
No	36%	37%	45%	23%	35%	36%	46%	56%	32%	49%	5%	32%
Not sure	24%	21%	21%	27%	13%	26%	14%	37%	16%	18%	48%	24%
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 23: Responsibility for the careers programme

Q: Is a particular individual allocated responsibility for careers work/advice at your school?												
	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Yes	89%	91%	92%	75%	97%	89%	90%	89%	94%	89%	83%	89%
No	8%	5%	7%	13%	3%	7%	8%	11%	6%	8%	5%	10%
Not sure	5%	4%	1%	12%	–	4%	1%	–	–	4%	12%	1%
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 24: Seniority of individual with responsibility for the careers programme

Q: Is that individual part of the school senior leadership team?												
	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Yes	46%	45%	40%	69%	46%	49%	41%	29%	58%	44%	29%	52%
No	54%	55%	59%	31%	53%	51%	57%	71%	41%	56%	69%	47%
Not sure	1%	–	1%	–	1%	–	1%	–	1%	–	2%	1%
Total (n)		145	137	41	69	172	71	8	94	188	41	100

Table 25: Challenge to stereotypical thinking

Q: How strongly do you agree or disagree that your school's career programme actively seeks to challenge stereotypical thinking (in terms of gender, etc.)?												
	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Strongly agree	26%	28%	25%	23%	38%	26%	19%	–	33%	23%	24%	23%
Agree	44%	46%	47%	45%	45%	49%	49%	18%	48%	49%	34%	53%
Neither agree nor disagree	27%	21%	23%	28%	14%	20%	28%	67%	17%	23%	35%	21%
Disagree	4%	4%	3%	3%	2%	4%	3%	15%	1%	4%	7%	3%
Strongly disagree	1%	1%	2%	–	1%	1%	1%	–	1%	2%	–	–
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 26: Contribution to raising students' aspirations

Q: How strongly do you agree or disagree that your school's career programme actively seeks to raise students' aspirations?												
	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Strongly agree	39%	47%	40%	36%	61%	44%	28%	8%	47%	41%	39%	43%
Agree	46%	41%	50%	48%	34%	46%	58%	43%	49%	46%	40%	50%
Neither agree nor disagree	10%	9%	8%	15%	5%	8%	11%	15%	4%	9%	21%	6%
Disagree	7%	3%	2%	–	–	1%	3%	34%	–	4%	–	1%
Strongly disagree	–	–	–	–	–	–	–	–	–	–	–	–
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 27: Use of career and labour market information

Q: In your opinion, approximately what proportion of students have accessed and used information about career paths and the labour market to inform their own decisions on study options by the age of 14 (or at the end of Year 9?)

	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
0–10%	5%	7%	4%	5%	5%	5%	6%	–	4%	7%	3%	2%
11–20%	7%	5%	4%	3%	3%	5%	3%	27%	4%	6%	–	5%
21–30%	4%	3%	6%	–	1%	4%	3%	11%	2%	5%	–	5%
31–40%	3%	1%	2%	8%	4%	3%	1%	8%	6%	2%	1%	2%
41–50%	9%	5%	7%	17%	11%	7%	7%	11%	13%	6%	4%	6%
51–60%	5%	1%	5%	7%	1%	4%	4%	15%	3%	4%	5%	2%
61–70%	5%	4%	4%	8%	7%	4%	6%	–	7%	4%	3%	5%
71–80%	11%	11%	11%	8%	16%	9%	9%	11%	19%	7%	7%	11%
81–90%	6%	8%	3%	5%	6%	5%	6%	8%	5%	5%	9%	10%
91–100%	20%	20%	25%	5%	22%	20%	22%	–	16%	21%	25%	20%
Don't know	30%	35%	29%	33%	24%	35%	32%	11%	24%	34%	42%	32%
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 28: Parents and carers' use of career and labour market information

Q: In your opinion, are parents and carers encouraged to access and use information about the labour market and future study options to inform their support to their children?

	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Yes	73%	76%	71%	67%	82%	74%	67%	67%	85%	68%	67%	78%
No	15%	13%	20%	12%	11%	15%	18%	23%	13%	20%	5%	14%
Don't know	12%	11%	8%	22%	6%	11%	15%	11%	2%	12%	28%	8%
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 29: Recording individual advice and guidance

Q: Does your school keep systematic records of the individual advice given to each student and subsequent agreed actions? (e.g. one record per student, perhaps as part of their pupil profile.)												
	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Yes	53%	62%	53%	45%	72%	58%	43%	29%	66%	56%	39%	65%
No	25%	23%	28%	20%	17%	23%	33%	49%	24%	28%	13%	16%
Don't know	21%	14%	18%	35%	11%	18%	24%	22%	10%	16%	48%	18%
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 30: Student access to individual records

Q: Do students have access to these records, and are they able to use them to support their career development?												
	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Yes	40%	49%	36%	42%	50%	47%	27%	11%	52%	40%	34%	48%
No	31%	28%	37%	20%	30%	29%	33%	57%	30%	34%	15%	23%
Not sure	30%	24%	28%	38%	20%	23%	40%	32%	18%	26%	52%	28%
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 31: Destination data

Q: Does your school collect and maintain accurate data for each pupil on their education, training or employment destination after they leave your school?

	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Yes, for all Y11 leavers	78%	82%	73%	83%	74%	78%	89%	63%	86%	78%	67%	89%
Yes, for all Y13 leavers	42%	40%	52%	27%	69%	40%	29%	36%	47%	40%	46%	36%
No	6%	7%	8%	3%	10%	8%	3%	–	5%	8%	5%	1%
Don't know	8%	5%	8%	7%	2%	6%	4%	29%	1%	6%	19%	6%
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 32: Opportunity to learn about careers from study of STEM subjects

Q: In your opinion, by the age of 14 (or the end of Year 9) approximately what proportion of students have had the opportunity to learn how the different STEM subjects help people to gain entry to, and be more effective workers within, a wide range of careers?

	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
0–10%	6%	6%	6%	3%	10%	5%	4%	–	9%	6%	–	7%
11–20%	6%	7%	2%	5%	2%	5%	6%	23%	2%	6%	5%	7%
21–30%	4%	3%	4%	–	1%	3%	6%	11%	–	5%	1%	3%
31–40%	5%	1%	3%	12%	–	3%	4%	19%	5%	2%	4%	1%
41–50%	8%	6%	6%	12%	15%	5%	2%	21%	7%	7%	4%	7%
51–60%	6%	5%	5%	10%	3%	5%	10%	–	9%	5%	2%	5%
61–70%	3%	4%	3%	–	5%	2%	3%	–	2%	3%	3%	1%
71–80%	6%	3%	7%	10%	4%	7%	5%	–	10%	4%	3%	9%
81–90%	1%	3%	0%	–	1%	2%	–	–	1%	2%	1%	1%
91–100%	21%	20%	23%	12%	27%	19%	19%	–	21%	19%	22%	23%
Don't know	39%	44%	41%	37%	31%	45%	40%	26%	35%	41%	56%	36%
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 33: Encounters with employers from age of 11 years onwards

Q: Approximately what proportion of students from the age of 11 (or the start of Year 7), have participated in at least one meaningful encounter* with an employer every school year until they leave?

*Definition of 'meaningful encounter': One in which the student has an opportunity to learn about what work is like or what it takes to be successful in the workplace.

	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
0–10%	14%	9%	14%	12%	10%	10%	11%	56%	12%	13%	3%	7%
11–20%	4%	3%	4%	5%	4%	4%	4%	–	1%	4%	7%	4%
21–30%	4%	4%	1%	8%	1%	3%	7%	8%	6%	2%	5%	2%
31–40%	1%	2%	1%	–	1%	1%	2%	–	1%	2%	–	1%
41–50%	8%	4%	5%	18%	9%	7%	3%	11%	7%	5%	12%	7%
51–60%	2%	2%	2%	3%	4%	2%	1%	–	6%	1%	–	1%
61–70%	2%	3%	1%	–	3%	2%	1%	–	2%	2%	–	–
71–80%	6%	8%	5%	5%	6%	7%	6%	–	4%	8%	6%	5%
81–90%	3%	4%	3%	–	2%	5%	2%	–	2%	4%	1%	6%
91–100%	38%	41%	42%	23%	40%	38%	41%	26%	48%	37%	30%	49%
Don't know	22%	20%	23%	25%	18%	22%	20%	–	12%	23%	37%	17%
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 34: Direct experience of a workplace by age of 16 years

Q: By the age of 16 (or at the end of Year 11), approximately what proportion of students have had at least one direct experience of a workplace (for example, through work visits, work shadowing or work experience), other than through part-time or holiday jobs?

	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
0–10%	8%	8%	6%	5%	5%	7%	8%	19%	8%	8%	3%	10%
11–20%	4%	3%	5%	5%	5%	4%	4%	–	2%	6%	–	4%
21–30%	4%	3%	1%	12%	3%	5%	2%	–	9%	2%	–	2%
31–40%	2%	3%	1%	–	2%	3%	–	–	–	3%	–	2%
41–50%	5%	6%	4%	3%	3%	4%	7%	–	5%	5%	5%	3%
51–60%	3%	1%	2%	3%	5%	0%	1%	11%	3%	1%	1%	3%
61–70%	3%	5%	1%	3%	3%	3%	1%	11%	3%	3%	2%	3%
71–80%	6%	5%	4%	12%	1%	7%	6%	–	8%	4%	6%	10%
81–90%	10%	9%	8%	17%	4%	11%	13%	8%	9%	10%	9%	9%
91–100%	47%	47%	53%	25%	59%	41%	52%	52%	45%	46%	50%	47%
Don't know	12%	10%	14%	15%	11%	15%	5%	–	7%	12%	25%	7%
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 35: Direct experience of a workplace by age of 18

Q: Only for schools with Sixth Forms. In Years 12 and 13, or by the age of 18, approximately what proportion of all students have had one direct experience of a workplace (for example, through work visits, work shadowing or work experience), other than through part-time or holiday jobs?

	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
0–10%	5%	3%	6%	–	3%	4%	8%	12%	4%	4%	6%	3%
11–20%	4%	3%	4%	–	1%	4%	5%	–	–	5%	–	–
21–30%	5%	5%	5%	–	3%	6%	6%	–	–	8%	–	4%
31–40%	5%	3%	3%	–	4%	1%	3%	17%	1%	1%	8%	7%
41–50%	11%	11%	5%	17%	9%	8%	5%	–	15%	8%	–	17%
51–60%	3%	5%	1%	–	2%	2%	6%	–	3%	3%	–	–
61–70%	4%	1%	1%	8%	5%	1%	–	–	4%	2%	–	6%
71–80%	9%	9%	6%	17%	7%	11%	9%	–	9%	7%	–	5%
81–90%	6%	9%	4%	–	5%	6%	5%	–	2%	8%	5%	11%
91–100%	32%	24%	36%	25%	36%	27%	32%	54%	39%	26%	31%	23%
Don't know	27%	27%	29%	33%	27%	30%	19%	17%	23%	29%	36%	24%
Total (n)		70	93	22	53	89	29	5	50	102	32	44

Table 36a: Meaningful encounters with a Sixth Form by age of 16

Q: By the age of 16 (or by the end of Year 11), approximately what proportion of students have had at least one meaningful encounter* with a Sixth Form?

*Definition of 'meaningful encounter': One in which the student has an opportunity to explore what it's like to learn in that environment.

	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
0– 10%	5%	6%	6%	–	2%	7%	2%	11%	1%	7%	3%	8%
11– 20%	4%	2%	2%	10%	–	4%	3%	–	3%	4%	–	1%
21– 30%	2%	1%	1%	3%	3%	1%	1%	–	2%	1%	–	2%
31– 40%	2%	2%	1%	–	–	1%	1%	8%	1%	2%	–	2%
41– 50%	6%	6%	4%	7%	1%	6%	4%	15%	5%	5%	8%	2%
51– 60%	–	–	–	–	–	–	–	–	–	–	–	–
61– 70%	2%	2%	1%	–	1%	–	4%	–	2%	1%	2%	1%
71– 80%	6%	3%	5%	12%	9%	5%	2%	–	10%	3%	3%	6%
81– 90%	5%	6%	4%	–	5%	4%	5%	–	6%	3%	7%	5%
91– 100%	51%	56%	57%	30%	66%	49%	54%	47%	56%	54%	38%	52%
Don't know	23%	17%	20%	38%	13%	22%	23%	19%	16%	20%	40%	21%
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 36b: Meaningful encounters with a college by age of 16

Q: By the age of 16 (or by the end of Year 11), approximately what proportion of students have had at least one meaningful encounter* with a college?

*Definition of 'meaningful encounter': One in which the student has an opportunity to explore what it's like to learn in that environment.

	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
0– 10%	6%	3%	6%	3%	14%	2%	–	11%	4%	5%	–	–
11– 20%	3%	2%	5%	–	8%	2%	2%	–	2%	2%	6%	2%
21– 30%	5%	4%	4%	8%	5%	3%	7%	8%	9%	3%	3%	6%
31– 40%	5%	4%	5%	–	1%	5%	2%	15%	1%	5%	4%	4%
41– 50%	5%	6%	5%	3%	4%	6%	4%	–	8%	4%	3%	5%
51– 60%	3%	1%	3%	3%	4%	1%	2%	8%	3%	2%	–	–
61– 70%	2%	1%	1%	3%	4%	1%	1%	–	2%	1%	1%	2%
71– 80%	3%	3%	2%	–	2%	3%	2%	–	1%	4%	–	4%
81– 90%	5%	7%	3%	3%	1%	6%	6%	–	4%	4%	10%	6%
91– 100%	43%	54%	38%	36%	40%	46%	51%	29%	48%	46%	34%	54%
Don't know	25%	16%	29%	38%	17%	26%	22%	29%	18%	24%	39%	17%
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 36c: Meaningful encounters with an apprenticeship provider by age of 16

Q: By the age of 16 (or by the end of Year 11), approximately what proportion of students have had at least one meaningful encounter* with an apprenticeship provider?

*Definition of 'meaningful encounter': One in which the student has an opportunity to explore what it's like to learn in that environment.

	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
0– 10%	17%	12%	20%	15%	28%	13%	11%	34%	15%	17%	11%	11%
11– 20%	12%	9%	8%	17%	13%	10%	9%	–	15%	10%	–	14%
21– 30%	7%	6%	5%	–	5%	3%	6%	18%	6%	5%	–	5%
31– 40%	2%	4%	2%	–	2%	2%	4%	–	1%	3%	2%	1%
41– 50%	4%	6%	2%	–	3%	4%	2%	–	3%	4%	–	6%
51– 60%	2%	2%	1%	–	1%	2%	–	–	2%	1%	2%	2%
61– 70%	1%	1%	1%	–	1%	1%	–	–	–	1%	3%	–
71– 80%	4%	5%	–	–	–	3%	–	11%	2%	2%	5%	3%
81– 90%	1%	2%	–	–	–	0%	3%	–	2%	0%	–	1%
91– 100%	21%	25%	20%	13%	21%	20%	30%	–	19%	24%	14%	23%
Don't know	39%	28%	42%	55%	26%	42%	35%	37%	34%	34%	63%	34%
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 37: Visits to universities

Q: (Only for schools with Sixth Forms.) By the age of 18, approximately what proportion of all students who are considering applying for university have had at least two visits to universities to meet staff and students?

	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
0– 10%	2%	1%	2%	–	–	3%	–	–	–	3%	–	3%
11– 20%	3%	1%	2%	–	–	2%	5%	–	3%	2%	–	4%
21– 30%	1%	1%	1%	–	1%	1%	–	–	–	2%	–	2%
31– 40%	5%	3%	–	–	–	–	3%	17%	2%	1%	–	–
41– 50%	9%	8%	7%	17%	11%	10%	2%	–	9%	9%	6%	12%
51– 60%	3%	1%	4%	–	3%	3%	3%	–	1%	3%	3%	6%
61– 70%	6%	7%	5%	–	3%	7%	5%	–	10%	3%	5%	9%
71– 80%	22%	15%	24%	8%	14%	18%	27%	54%	8%	19%	32%	19%
81– 90%	6%	5%	9%	–	12%	5%	2%	–	6%	6%	8%	2%
91– 100%	20%	20%	21%	25%	23%	22%	22%	–	23%	24%	7%	14%
Don't know	33%	37%	25%	50%	33%	29%	29%	29%	39%	28%	39%	30%
Total (n)		70	93	22	53	89	29	5	50	102	32	44

Table 38: Interviews with professional careers adviser by age of 16

Q: By the age of 16 (or by the end of Year 11), approximately what proportion of students have had an interview with a professional careers adviser? (By 'professional' we mean that advisers are professionally qualified to give career guidance.)												
	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
0– 10%	4%	4%	4%	5%	3%	4%	6%	–	3%	5%	3%	3%
11– 20%	3%	2%	3%	–	4%	2%	2%	–	1%	4%	–	2%
21– 30%	3%	3%	2%	5%	2%	4%	3%	–	5%	3%	1%	3%
31– 40%	4%	3%	2%	8%	–	4%	5%	–	5%	3%	2%	3%
41– 50%	6%	5%	5%	7%	10%	6%	2%	–	11%	3%	5%	6%
51– 60%	3%	2%	2%	3%	2%	1%	5%	–	1%	2%	6%	–
61– 70%	3%	1%	4%	5%	5%	4%	1%	–	4%	3%	3%	4%
71– 80%	6%	5%	6%	3%	7%	5%	3%	8%	6%	4%	7%	8%
81– 90%	5%	6%	5%	3%	7%	5%	5%	–	3%	7%	3%	5%
91– 100%	46%	50%	47%	22%	50%	44%	40%	69%	44%	46%	39%	53%
Don't know	22%	19%	18%	38%	10%	21%	27%	23%	17%	21%	32%	12%
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 39: Interviews with professional careers adviser by age of 18

Q: For schools with Sixth Forms. During their 12th and 13th year of study (aged 17 and 18), what proportion of students have an interview with a professional careers adviser?												
	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
0– 10%	7%	7%	9%	–	5%	7%	12%	–	–	11%	3%	3%
11– 20%	6%	5%	6%	–	6%	4%	9%	–	6%	4%	5%	8%
21– 30%	7%	8%	6%	–	4%	8%	6%	12%	9%	6%	3%	9%
31– 40%	3%	1%	1%	8%	5%	1%	2%	–	4%	2%	–	6%
41– 50%	9%	7%	6%	17%	10%	6%	6%	12%	12%	8%	–	6%
51– 60%	2%	1%	1%	–	1%	2%	–	–	3%	1%	–	2%
61– 70%	3%	1%	1%	8%	–	4%	–	–	–	2%	6%	2%
71– 80%	6%	3%	7%	–	1%	6%	5%	12%	3%	6%	4%	8%
81– 90%	2%	3%	1%	–	4%	–	3%	–	2%	2%	–	2%
91– 100%	23%	20%	25%	17%	34%	21%	5%	34%	24%	20%	27%	23%
Don't know	40%	44%	36%	50%	30%	40%	50%	29%	38%	39%	52%	33%
Total (n)		70	93	22	53	89	29	5	50	102	32	44

Table 40: Importance of the careers programme for students

Q: In your opinion, in terms of your overall school culture and ethos, how important is the careers programme for your students?												
	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Very important	51%	54%	54%	47%	65%	50%	54%	26%	63%	50%	47%	56%
Quite important	37%	37%	36%	36%	32%	38%	41%	40%	33%	38%	35%	37%
Neither/ nor	10%	7%	7%	17%	2%	10%	2%	34%	3%	9%	18%	6%
Not important	2%	2%	2%	–	2%	2%	3%	–	1%	3%	–	1%
Not at all important	–	–	–	–	–	–	–	–	–	–	–	–
Total (n)		159	148	54	71	194	78	9	100	100	50	111

Table 41: Challenges to providing meaningful career learning (Part 1)

Q: What challenges does your school experience in providing your students with meaningful career learning?												
Coded resposes	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Costs/money/ funds	28%	28%	29%	43%	33%	34%	25%	8%	28%	35%	17%	31%
Time/finding time/ time constraints	17%	20%	19%	–	15%	14%	28%	–	13%	20%	8%	15%
Access to appropriate/ suitable placements	15%	15%	17%	12%	16%	17%	11%	11%	19%	14%	12%	23%
Lack of time within curriculum	12%	14%	18%	5%	15%	15%	13%	8%	6%	19%	11%	13%
Students' lack of interest/ engagement	9%	8%	11%	8%	5%	10%	10%	11%	12%	8%	10%	11%
Lack of contacts/ connections	10%	7%	9%	13%	9%	8%	11%	–	12%	8%	5%	15%
Resource (gen.)	5%	5%	7%	3%	6%	5%	7%	–	7%	6%	1%	6%
Inexperienced/ untrained staff	5%	6%	5%	5%	5%	4%	7%	8%	4%	7%	1%	3%
Students' low aspirations	7%	4%	8%	–	3%	5%	5%	27%	2%	6%	6%	6%
Cuts to Connexions service	6%	6%	2%	10%	1%	4%	10%	–	3%	4%	13%	5%
Up-to-date information	5%	3%	3%	7%	10%	2%	1%	–	6%	3%	3%	7%
Parents' lack of engagement	5%	3%	5%	–	–	5%	2%	11%	3%	3%	5%	6%
Mentions of regulations/ government pressures	3%	3%	3%	3%	6%	3%	2%	–	4%	2%	4%	1%
Advisor for all students/more advisor time	3%	2%	2%	8%	4%	3%	3%	–	5%	2%	3%	2%
No/none/nothing	3%	1%	3%	7%	2%	2%	1%	–	3%	2%	7%	1%
Parents' low expectations	3%	4%	2%	–	–	4%	1%	–	1%	3%	2%	4%
Work experience ceased/limited	3%	6%	–	–	1%	3%	3%	–	4%	2%	5%	3%
Lack of training available for staff	3%	3%	2%	–	3%	1%	2%	8%	1%	3%	1%	–
Poor area/ poverty/high employment	3%	2%	–	1%	2%	1%	–	1%	3%	–	3%	2%
Greater care/advice for SEN students	2%	3%	1%	–	2%	3%	–	–	2%	2%	2%	2%

Table 41: Challenges to providing meaningful career learning (Part 2)

Q: What challenges does your school experience in providing your students with meaningful career learning?												
Coded resposes	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Priorities	2%	1%	3%	–	–	2%	2%	8%	1%	2%	1%	1%
Student attendance/ participation	2%	–	1%	5%	–	1%	3%	–	1%	2%	–	3%
Staff (gen.)	2%	1%	2%	–	–	2%	–	–	1%	2%	–	1%
Impartial advice/ freedom of choice	1%	1%	1%	–	1%	2%	–	–	1%	1%	3%	–
Uninspiring/ unsuitable advisers	1%	1%	2%	–	1%	1%	1%	–	–	1%	2%	–
Breaking stereotypes/ perceptions	3%	1%	1%	–	1%	–	2%	11%	–	1%	3%	–
Mentions of SLT	1%	–	1%	–	1%	1%	–	–	–	1%	1%	1%
Lack of range/ variety	1%	–	1%	–	–	–	1%	–	–	0%	–	–
Total (n)		159	148	54	71	194	78	9	100	212	50	111

Table 42: Careers provision that schools would like to stop doing

Q: Is there any form of career provision that you would like to cease?												
Coded resposes	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
No/none/ nothing	86%	92%	88%	82%	85%	90%	89%	63%	86%	88%	94%	87%
Work experience (for some students)	5%	2%	6%	5%	4%	3%	5%	11%	4%	4%	3%	3%
Computer-based activities	3%	1%	1%	5%	–	2%	–	8%	3%	1%	2%	3%
Other	3%	3%	5%	1%	3%	5%	–	2%	5%	–	7%	4%
Less meaningful activities	2%	1%	1%	3%	5%	0%	–	8%	2%	1%	1%	1%
Not stated	1%	1%	1%	–	3%	1%	–	–	2%	0%	–	1%
External advisors	2%	1%	1%	–	1%	0%	–	11%	1%	1%	–	–
Don't know	1%	1%	–	–	–	–	1%	–	–	0%	–	–
Total (n)		144	138	54	64	181	73	9	94	196	46	102

Table 43: Careers provision that schools would like to do more with

Q: Are there any specific careers activities that you would like to increase?												
Coded resposes	Average response	Type of school (%)			Ofsted grade (%)				Quality mark for career guidance (%)			Eligible for free school meals (%)
		State-funded LA-maintained school	State-funded academy	Other	Outstanding	Good	Requires improvement	Inadequate	Yes	No	Not sure	15% or more
Work experience/ hands-on experiences	22%	23%	23%	20%	17%	27%	19%	11%	23%	20%	31%	28%
No/none/ nothing/n.a.	17%	15%	18%	27%	13%	18%	19%	8%	17%	17%	26%	13%
Businesses/ companies – involvement/ interaction	17%	22%	19%	3%	14%	17%	24%	26%	19%	20%	7%	21%
Guidance/ advisors – face-to-face/one-to-one/ CVs/job applications, etc.	13%	14%	13%	8%	12%	12%	16%	8%	15%	15%	–	14%
Other	13%	14%	8%	13%	10%	11%	15%	23%	10%	12%	12%	12%
Interview experience	5%	7%	5%	–	4%	6%	7%	–	5%	6%	4%	3%
Talks/guest speakers	7%	6%	5%	3%	5%	3%	7%	29%	7%	4%	7%	6%
Connexions	6%	2%	1%	17%	–	4%	9%	–	5%	3%	9%	1%
Links/partnerships with universities	4%	2%	4%	7%	9%	2%	4%	–	5%	3%	1%	4%
Funding/finance/ costs	4%	3%	4%	5%	4%	4%	1%	–	2%	4%	5%	6%
Careers fairs at school/more local	4%	1%	6%	–	2%	4%	–	11%	1%	4%	–	2%
Apprenticeships– increased access to	3%	2%	4%	–	5%	3%	–	–	1%	3%	2%	3%
Not stated	3%	3%	2%	–	8%	1%	–	–	3%	2%	–	1%
Day release/ work shadowing	3%	2%	2%	–	2%	2%	2%	8%	2%	2%	–	1%
Apprenticeships – more info/ increased awareness	3%	–	4%	–	2%	2%	–	–	–	2%	5%	1%
Parent/carer involvement	2%	2%	1%	–	3%	1%	–	–	2%	1%	–	–
Computer-based/ online careers packages	2%	1%	2%	–	2%	1%	–	–	–	2%	1%	2%
All/everything	1%	2%	1%	–	1%	1%	–	–	1%	0%	2%	2%
Don't know	1%	1%	1%	–	–	1%	1%	–	–	1%	1%	1%
STEM-based activities/events	2%	–	0%	3%	4%	–	–	–	2%	0%	–	2%
Total (n)		144	138	54	64	181	73	9	94	196	196	102